

**DAVID L. HOBSON**  
7TH DISTRICT, OHIO



**COMMITTEE ON APPROPRIATIONS**

SUBCOMMITTEES:  
ENERGY AND WATER DEVELOPMENT  
CHAIRMAN  
DEFENSE

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**CONGRESS OF THE UNITED STATES**  
**HOUSE OF REPRESENTATIVES**

August 12, 2005

BRAC Commission

**AUG 15 2005**

Received

The Honorable Anthony Principi  
Base Realignment and Closure Commission  
2521 South Clark Street, Suite 600  
Arlington, VA 22202

Dear Mr. Chairman:

Over the past several weeks, the Columbus and Dayton communities along with various Members of the Ohio delegation have submitted many point papers and supporting documents to the BRAC Commission dealing with military facilities in our communities. At this time, I wanted to submit for the Commission's review an updated and current list of those papers, as well as several letters.

The point papers and letters, which are attached, include information regarding DOD recommendations for the following issues and facilities:

178th Fighter Wing, Springfield-Beckley Airport;

Establish Centers for Rotary Wing Air Platform Development & Acquisition, Test & Evaluation;

Joint Centers of Excellence for Chemical, Biological, and Medical Research and Development and Acquisition;

BRAC Commission AFIT/NPS/DLI Inquiry;

Close Brooks City Base;

Consolidate Civilian Personnel Offices (CPOs) within each Military Department and Defense Agencies;

Establish Centers for Fixed Wing Air Platform Research, Development & Acquisition, Test & Evaluation;

Defense Research Service Led Laboratories;

Establish Centers for Fixed Wing Air Platform Research, Development & Acquisition, Test & Evaluation (Live Fire Test and Evaluation);

Dayton Defense Finance and Accounting Service;

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Consolidate Air and Space C4ISR Research, Development and Acquisition, Test and Evaluation (includes a chart and several other attachments);

Joint Letter from the Mayor of the City of Monterey and the President of the Dayton Development Coalition; and

Defense Finance and Accounting Service (DFAS) Columbus

Thank you in advance for your consideration of this material. While I continue to have many concerns and problems with many of DOD's recommendations, because either their numbers or their methodology are flawed, I greatly appreciate the work that you, the other commissioners, and the staff have done. I trust you will find this information timely and useful as you prepare to conclude your deliberations.

Sincerely,



DAVID L. HOBSON  
Member of Congress

DLH:bn

## **178<sup>th</sup> Fighter Wing, Springfield-Beckley Airport**

DoD BRAC recommends realigning Springfield-Beckley Municipal Airport Air Guard Station, OH. Distribute the 178<sup>th</sup> Fighter Wing's F-16 aircraft.

### **Dayton-Springfield Recommendations:**

- **Construction Joint Reserve Component Training Center at Springfield-Beckley Municipal Airport**
- **Maintain F-16 Fighter Training Mission at 178 FW FTU until no longer programmatically needed by the Air Force (AETC).**

### **Rationale:**

- The BRAC RC-Pat (Reserve Component- Process Action Team) approved and supports the construction of a Reserve Component Center at Springfield-Beckley Municipal Airport. The Reserve Component Center will be built on land adjacent to the 178 FW RTU and will support the joint use of facilities such as the medical training facility, mobility processing areas, dining hall, vehicle maintenance facility, fuels storage systems, classrooms, and other common use areas like parking. BRAC does not change this RC Joint Use Concept and it is independent of the 178 FW FTU, Springfield ANG Base issue. The facility construction to support the Army National Guard and the Army Reserve would be on land contiguous the real estate of the 178 FW RTU.
- **Recommend the 178 FW F-16 FTU be maintained as an F-16 fighter training mission location.**
- The BRAC justification for realigning the Springfield-Beckley Airport improperly identifies Lackland as the only ANG F-16 Flying Training Unit.
- The Springfield FTU is a critical link in meeting the Air Force pilot production requirements of 1100 pilots per year for the foreseeable future. Nothing has changed this requirement.

**Eliminating this pilot training capacity at the 178 FW will damage the Air Force.**

- **The BRAC COBRA model calculations for Springfield-Beckley Municipal Airport 178 FW FTU show the reduction of key personnel from the Operations and Maintenance areas as the primary cost savings for 2007, and beyond. This reduction of key pilot training personnel that are needed to train F-16 pilots at the 178 FW FTU will not show a cost savings until 17 years after the personnel reduction is achieved.**
- **In 2025 (20 years after BRAC-05) the entire BRAC savings for the realignment of the 178 FW FTU only amounts to a total of \$693,000. (Yet, it will take an \$11,367,000 dollar investment in 2007 to realign the 178 FW FTU).**
- **The cost of training one fighter pilot according to the AFI 65-503, Table A34-1, Representative Officer Aircrew Training Costs shows it cost \$776,000 to graduate one pilot through the F-16 basic course. *(The total BRAC savings generated after 20 years by eliminating the 178 FW F-16 FTU in 2007 is less than it cost to train one F-16 pilot to a basic level).***
- **If the reduction of these key operations and maintenance personnel at the 178 FW FTU is slipped until 2010, or beyond, as shown in the BRAC data (The BRAC information shows some of the 178 FW FTU aircraft staying in place for pilot training through 2010) then there is no Net Present Value (NPV) cost savings generated according to the BRAC-05 COBRA data tables. The identified recurring cost savings for eliminating the key 178FW FTU training personnel is \$2.673 million annually. Slipping the proposed reduction of key personnel by only one year beyond 2007, let alone the three years identified by BRAC, will actually cost the tax payer millions of dollars to accomplish and produce no savings. The proposed realign of the 178 FW FTU is very marginal for cost savings in 2007 and there is no payback in the 20 year look by the COBRA data analysis if these personnel changes are postponed beyond the first or second quarter of 2007.**
- **Don't BRAC the training capability at the 178 FW FTU, allow the 178 FW FTU to train pilots at Springfield, Ohio until there**

**is no longer a need that is clearly defined by AETC production requirements.**

- **The Air Force has identified the need to train 1100 fighter pilots per year for at least the next 5 to 7 years. The 178 FW FTU is a critical facility for meeting this need. When this forecast level of F-16 pilot production changes and is no longer needed, the Air Force can programmatically close down the F-16 FTU school house at Springfield-Beckley Municipal Airport and move the 178 FW FTU capacity to other missions of value to the warfighter.**
- **Don't realign the 18 PAA 178 FW FTU to capture what appears to be marginal Net Present Value savings in the COBRA data, but transform the 178 FW FTU when F-16 pilot production is no longer needed.**
- **There are significant errors in the Mission Capability Index (MCI) calculations for Springfield-Beckley Municipal Airport as shown below. Some of these errors occurred as a result of the timeframe and the way questions were asked for BRAC data collection in 2003. Since then there have been numerous construction projects completed at Springfield-Beckley Municipal Airport. These MCI errors are identified in the following information.**

### **Significant Errors in Fighter Mission Capability Index (MCI) Category**

There are significant formula calculation errors in the Fighter Mission Compatibility Index (MCI) category for the 178<sup>th</sup> Fighter Wing. When properly recalculated, the Springfield-Beckley Airport moves from a previously incorrect #128 ranking to #24 in the entire US Air Force.

These errors include:

1. Formula 1245.00 (3.75 POINT ERROR) Proximity to Airspace Supporting Mission: the oversight of 24 hour NOTAM and Restricted airspace capability, combined with other errors in calculating our MOA's strengths, severely miscalculated the value of the this fine military airspace. Another 144 cubic miles of airspace could not be accounted for and was not included in the formula calculation. This airspace, less than 40 miles from the runway, is one of only three operating areas east of the Mississippi River with an upper

altitude limit of 50,000 feet MSL; and the supersonic airspace above 30,000 feet MSL was excluded from consideration. When combined with the soon to be activated Racer MOA, the unique geographical location of Springfield-Beckley MPT AGS represents tremendous potential and opportunity for inclusion in the Future Total Force. These areas will support F-22, F-35, Unmanned Combat Aerial Vehicles (UCAVs), GPS Guided Joint Direct Attack Munition (JDAM), Laser Guided Bomb (LGB) and Small Diameter Bomb (SDB) employment. The extraordinary potential for synergy of these future weapon systems being tested in close proximity to Wright Patterson Air Force Base may not have been considered because there was no way to document these benefits to the Future Total Force in the BRAC process. Lastly, the close proximity to dozens of aerial refueling assets secured at Rickenbacker ANGB in Columbus, Ohio through 2040 was not included.

2. Formula 1246.00 (5.29 POINT ERROR) Proximity to Low Levels Supporting Mission: this formula was significantly miscalculated by DOD, ignoring dozens of IR and VR routes within 150 miles. There are not many other installations in the United States with access to as many low levels in close proximity to its home station as Springfield-Beckley MPT AGS. Unlike other parts of the country, practically every low level training route terminates in the same military and restricted operating areas detailed above yielding unprecedented value.
3. Formula 1271.00 (3.20 POINT ERROR) Prevailing Installation Weather Conditions: this formula was miscalculated by DOD using incomplete and misleading data. The apparent conclusion that Wright Patterson Air Force Base (only 8 air miles to the west of Springfield) has 33 better weather days per year seems to be a significant stretch. This is likely attributed to the use of reported vice realistic data as, unlike most every active duty base or regional international airport, our installation weather personnel are not “on station” 2465. As a result, Springfield-Beckley MPT AGS received no points in this category.
4. Formula 1233.00 (4.79 POINT ERROR) Sufficient Munitions Storage: the existence of standing courtesy storage agreements at Wright-Patterson Air Force Base is disregarded, ignoring the capability and value with no additional costs to the ANG or DOD.
5. Formula 8.00 (0.74 POINT ERROR) Ramp Area and Serviceability: DOD data suggest that Springfield-Beckley MPT AGS only possesses ramp space for 24 fighter aircraft. This was reportedly based upon a satellite photo used in their determination; unfortunately, that photo was several years old. Currently, the installation has an additional brand new 18 parking spot ramp, as well as 2 brand new arming areas with 6 spots each, for an additional 30 spots and a total capability of parking 54 fighter aircraft. Further, the new ramp design allows for several more parking spots to be added between the new ramp and

the new arming area thanks to the foresight of the 178th Fighter Wing. DOD states that the cost to add a second squadron is \$45,300,000, yet their estimate is more than \$20,000,000 in error – and a large part of this error can be attributed to this oversight. This resulted in the installation receiving 0 points for what might be considered one of the finest fighter ramps in the ANG. Though the DOD calculation was in error, worse yet is the slighted formula itself which does not allow any sliding scale points for ramp space between 66k and 174k square yards (the next square yardage level required to achieve significantly more points in this category). This inconsistent calculation (there were other formulas that used sliding point scales) favored active duty over Air National Guard bases (and Springfield-Beckley MPT AGS) who have long remained disciplined in building sustaining only what is required for mission accomplishment.

6. Formula 1232.00 (2.44 POINT ERROR) Sufficient Explosive-sited Parking: DOD erred in their own estimate of 24 parking spots, with the correct number being 54 available. That miscalculation further misrepresented Springfield-Beckley MPT AGS by ignoring the existence of explosive sited parking. The fact that our installation is now an AETC operation means that the base does not have a current need for this siting. But that does not mean we are not capable. The original 24 aircraft parking spots at Springfield-Beckley MPT AGS were previously certified for explosive siting as recently as 1998 when it was an F-16 General Purpose (GP) fighter unit. It would only take a few weeks (worst case) to receive renewed explosive siting certification. Additionally, all 30 additional parking spots meet all explosive siting design requirements; yet the true 54 aircraft explosive siting capability at Springfield-Beckley MPT AGS goes completely unaccounted for in the DOD's recommendation.
7. Formula 1221.00 (0.32 POINT ERROR) Hangar Capability Small Aircraft: the formula drew data from a misleading question, and incorrectly summarized the storage capability of F-15 sized aircraft at Springfield-Beckley MPT AGS. Correcting the reporting error would result in additional Fighter MCI points.
8. Formula 1235.00 (1.49 POINT ERROR) Installation Pavement Quality: airfield ramp, apron, runway and taxiway additions improvements at Springfield-Beckley MPT AGS are so new that PCN and ACN data has only now become available – a full year after BRAC data collection began. The airport and its aprons taxiways runways can handle the absolute maximum number of passes for any aircraft, ranging in size and weight from every class of fighter to C-17; the result is absolutely no deficiency nor degradation in pavement quality. Unfortunately, this is overlooked in the formula calculation. This error does not reflect the superior infrastructure already in place at Springfield-Beckley MPT AGS which can meet DOD requirements of hosting 6 x C-17 aircraft.

9. Formula 1205.10 (1.88 POINT ERROR) Buildable Acres for Industrial Growth: the current land lease at Springfield-Beckley MPT AGS offers (at a minimum) an additional 167.9 acres in long term lease options through 2048, with 228.3 total acres secured in the already approved long range installation site plan. That the 178th Fighter Wing is not currently paying for the land grossly devalues and underestimates the buildable acreage upon which industrial growth could easily be erected. Agreements are already in place with the local government, and the land has been secured committed exclusively for ANG use. The installation frontage road has even been committed to future Springfield-Beckley MPT AGS exclusive use to further enhance the already substantial force protection capabilities currently in place. Visually comparing bases which survived DOD's recommendation using any commercially available overhead satellite imagery program reveals the miscalculation made in this formula. Moreover, this error resulted in significant points lost in many other MCI categories as well.
10. Formula 1205.20 (1.88 POINT ERROR) Buildable Acres for Air Operations Growth: the installation received lower scores not once but twice in the gross miscalculation of this formula as well. All subjects detailed above in Formula 1205.10 are exactly the same, resulting in misleading and significantly data errors and misrepresentation of Springfield-Beckley MPT AGS's capacity for air operations growth.
11. Formula 1241.00 (0.44 POINT ERROR) Ability to Support Large-Scale Mobility: as with Pavement Quality, the PCN and ACN data were not available during BRAC data calls for the countless new improved paved surfaces on the installation. Research of newly published data reveals that Springfield-Beckley MPT AGS is capable of the maximum large-scale mobility capacity, defined by DOD as the ability to support 6 x C-17's.

MPT AGS has long used courtesy storage of live weapons at Wright Patterson AFB, and to needlessly construct a facility here would have been unwise and a waste of taxpayer dollars; yet, this decision ultimately resulted in a deficiency rather than a strength. Further, the 178th Fighter Wing can stage Air Sovereignty Alert (ASA) missions out of Wright Patterson Air Force Base without dislocating any personnel, yet this is not even considered. Few ANG bases can tout such a capability, and the cost savings to DOD combined with the quality of life benefits for aircrew and maintenance personnel are enormous.

### **Other Significant anomalies exist:**

1. The COBRA model was found to be flawed and in error. The calculations do not take into account the cost of human capital and the very expensive cost to reconstitute or replicate their training. The COBRA model does not address

the correct salaries of those assigned to supporting flying operations at Springfield-Beckley MPT AGS. Further, support personnel such as civilian simulator and ground training school house personnel aren't even included in the criterion, and hence the calculation itself. This becomes problematic when the COBRA model showed human capital leaving in FY07 but the aircraft remaining until FY10 (an additional three years). Currently, Springfield-Beckley MPT AGS has F-16 student PFT training loads scheduled through FY08. The end result is a \$13,062,000 error in purported DOD cost savings estimates. Ultimately, disbanding the 178th Fighter Wing and terminating flying operations at Springfield-Beckley MPT AGS will cost the American taxpayer \$12,362,000, and will likely never result in the previously reported low cost savings of \$700,000 in 17 years. Worse, when the 225 full-time federal jobs necessary to meet DOD recommendations for continued flying operations through 2010 are considered, an actual \$49,406,625 error was made (\$73,195 per year times 225 employees). This entire scenario completely calls into question the accuracy of the COBRA model itself.

2. The local community is severely impacted. Springfield-Beckley MPT AGS is the number 8 employer in Clark County, Ohio and the economic impact will be significant. Worse yet is that the bases and communities gaining our F-16's possess significantly more business activity and population base supporting their local community than Springfield, Ohio. Our total job loss among a local population of 67,753 results in a 0.6% loss, yet the redistribution of these positions as detailed in the DOD recommendation doesn't even amount to a 0.1% net gain for those three communities combined. In fact, the job loss relative to our population is 34 times greater than the gain experienced by those three communities. Even more disturbing is the oversight of actual jobs lost by disbanding the 178th Fighter Wing; in reality, 450 full and part-time Federal jobs will be lost – not the 291 jobs claimed by DOD. This significant discrepancy is the result of DOD overlooking contractor (Lockheed Martin L3 Communications personnel) and state employees (firefighters, tower personnel, weather forecasters, etc). The decision appears to have an unfair negative effect on a community with considerable dependence on the income of personnel assigned to Springfield-Beckley MPT AGS.
3. The DOD's claim that Springfield-Beckley MPT AGS is an ideal selection for realignment is untrue. The installation is much more ideally suited for conversion back to a General Purpose F-16 Combat unit. The best timing for this conversion would come at the expiration of the Air Force's requirement for the 178th Fighter Wing to serve in its current assignment as an F-16 Formal Training Unit. Ultimately, the installation is well positioned to become a 48 PAA F-35 Joint Strike Fighter General Purpose unit as part of the Future Total Force, currently under consideration and being drafted by DOD for implementation. To wit:

4. Current 178th Fighter Wing manning is at 109.08%; that's #1 in Ohio and #2 in the entire Air National Guard nationwide. Units on the list to which our aircraft are to be reassigned have as much as 20% lower in total manning percentages. In fact, current aircrew manning already in place at Springfield-Beckley MPT AGS would fulfill 100% of the projected full-time pilot requirements for a 24 PAA General Purpose F-16 or Joint Strike Fighter F-35 squadron as calculated by DOD. Not one full-time pilot needs to be trained or moved to the Springfield, Ohio area to support this mission as we're already in place, well trained, and highly experienced. The current investment in our cadre of instructor pilots alone is estimated to be more than \$120,000,000, and is likely to be lost in its near entirety should DOD's recommendation be approved.
5. The 178th Fighter Wing also has 78% of projected full-time aircraft maintenance personnel manning required for a 24 PAA squadron as calculated by DOD already in place. 80% of our maintenance personnel are 5 level or above, with 74% at 7 level or above. Our experience and performance are so highly ranked that our 15.49 UTE rate is practically equivalent to the 15.58 Active Duty Air Force Block 30 UTE rate. DOD should have considered that active duty Air Force units employ two fully manned maintenance shifts while Springfield-Beckley MPT AGS's only employs one to one-and-a-third maintenance shifts. This is made possible by our extensive experience and efficiency, something the BRAC process completely overlooked.
6. Springfield-Beckley MPT AGS has served numerous other units by relieving their past and present manning deficiencies, with aircrew maintenance support personnel deploying across the nation and overseas to fill gaps left by insufficient recruiting and retention. Further, several national leadership positions have been filled by former members of the 178th Fighter Wing, representing an irreplaceable success story in the defense of our nation.
7. Given the manning situation detailed above, the assumption that personnel at a realigned facility such as Springfield-Beckley MPT AGS would simply "move with the aircraft" to another location in order to support the forecasted increase in that unit's full-time employment is neither cost effective nor realistic. At best, it displaces the most people while at the same time ignoring the considerable cost and pain associated with relocation. More likely, a significant loss will be experienced as practically every unit member has close ties to their local community, with many living in the Columbus and Cincinnati areas as well. Many members of the 178th Fighter Wing who did not begin their career at Springfield-Beckley MPT AGS have moved here to be closer to their family and raise their children where they grew up.
8. A new state of the art operations building was recently completed (\$7,000,000 investment in 2002 \$12,600,000 value in 2010), and is already capable of completely housing two separate 24 PAA F-16 or F-35 JSF General Purpose

squadrons for a total of 48 PAA fighter aircraft and all associated aircrew personnel. Further, the facility is already Sensitive Compartmentalized Information Facility (aka SCIF) capable, an extremely costly requirement which will have to be duplicated elsewhere. The 178th Fighter Wing has spent years designing and configuring the building, and in my estimation there are few other operations buildings as functional and Joint Strike Fighter ready as that Springfield-Beckley MPT AGS.

9. Springfield-Beckley MPT AGS is one of only three ANG units in the United States to possess three or more flight simulators, and the only installation in the nation with 4 x Block 30 F-16C devices. Our scheduled 4000 square foot simulator expansion, previously approved and ready for construction, can house 4 x full 360 degree field of view simulator devices, complete with a state of the art brief and debrief system, for less than \$3,000,000 (\$1,500,000 in minor construction, and \$1,500,000 in additional equipment). This facility, previously scheduled for completion in Spring 2006, is capable of sustaining not only local Formal Training Unit workloads, but can also support up to 480 active duty Air Force and ANG pilots per year in fully immersive air combat simulation training. Our simulator facility has recently received a significant upgrade in long haul network connectivity, permitting our training devices to simultaneously connect to any other Army, Navy, Air Force, or Marine simulator around the world. The value of this impressive Distributed Mission Training (DMT) capability is further highlighted when compared to that which Air Force and ANG aircrew receive at the Air Force Research Laboratory in Mesa, Arizona. That facility only supports air-to-air mission training, whereas our facility permits full employment in all F-16 mission areas (air-to-air, air-to-ground, Night Vision Goggle, Laser Guided Bombs with Targeting Pods, etc). All of this is conducted using a photo-realistic terrain database of several critical areas of concern in the Global War on Terror, including North Korea, Iraq and Afghanistan. Even better, this training represents a potential \$15,360,000 annual flying hour savings—not to mention the wear and tear on our aircraft inventory.

10. Extensive additions and renovations have occurred since conversion to a Formal Training Unit (FTU) in 1998. The total expenditure to date has exceeded \$50M, and is significantly greater when forecasted in 2010 Dollars. If the 178th Fighter Wing flying operation is disbanded and is reconstituted at other locations, many if not all of the facilities and infrastructure improvements procured in the last 5 years at Springfield-Beckley MPT AGS will need to be completed at other installations at those installations. Many of these same gaining bases already have plans on the books to construct these same facilities, representing tens of millions in potentially wasted taxpayer Dollars. These facilities and infrastructure improvements include:

- New explosive sited arming areas and an F-35 Joint Strike Fighter capable hush house (the only one in the ANG, a combined \$4,800,000 investment

in 2003 \$8,100,000 value in 2010). Note – Springfield-Beckley MPT AGS has one of only four 75,000 pound thrust tie downs systems in the United States. The remaining three locations are on active duty Air Force bases (Nellis, Eglin and Langley). This is a natural requirement for F-22 and F-35 Joint Strike Fighter aircraft and was purposefully designed and built with this capability in mind;

- New supply building (\$4,900,000 investment in 1999 \$10,000,000 value in 2010);
- New dining and medical facility (\$4,400,000 investment in 1995 \$10,600,000 value in 2010);
- New firehouse (\$5,600,00 investment in 2005 \$8,500,000 value in 2010);
- New civil engineering building (\$4,200,000 investment in 2000 \$8,200,000 value in 2010);
- New front gate with complete force protection (\$300,000 investment in 2005 \$600,000 value in 2010);
- New control tower (\$4,200,000 invested in 2005 \$6,100,000 value in 2010)
- New parking ramp (\$4,250,000 investment in 2003 \$6,800,000 million value in 2010);
- New taxiway barriers runway overruns (\$5,200,000 invested in 2002 \$8,800,000 value in 2010);
- New Non-Destructive Inspection (NDI) facility (\$700,000 invested in 2003 \$1,200,000 value in 2010). Note – Springfield-Beckley MPT AGS does NDI work for several other ANG bases. This necessary capability would have to be duplicated elsewhere, yet this fact goes unmentioned in the DOD's recommendation;
- New airfield lighting (\$1,200,000 invested in 2005 \$1,600,000 value in 2010);
- New corrosion facility (\$2,100,000 invested in 1999 \$5,200,000 value in 2010);
- Total aircraft hangar renovation (\$6,400,000 invested in 2003 \$10,200,000 value in 2010);

- Extensive airfield perimeter force protection measures too numerous to detail.
11. The proximity to Wright Patterson Air Force Base is completely ignored. The Air Force seeks to institute a “community basing” concept at Burlington, Vermont; yet this overlooks the benefit to active duty personnel assigned to Springfield-Beckley MPT AGS of having access to the third largest Air Force Base in the United States as measured by active duty, civilian and contractor personnel. The hospital itself is expanding in size and scope, and the housing commissary exchange privileges constitute irreplaceable value. It is difficult to imagine another area better suited for consideration as the ideal geographical model for the community basing concept.
  12. The value of the Air National Guard to the Homeland Security Mission and Global War on Terror (GWOT) is extraordinary. Springfield-Beckley MPT AGS and the 178th Fighter Wing epitomize this in every single way, from infrastructure, to growth capacity, to the countless professionals that have committed their lives to serving their nation, their state and their community. Springfield-Beckley MPT AGS is the number two fighter sortie generation squadron in the Air National Guard, second only to another ANG fighter wing with three times the number of aircraft. We’re the number one F-16 student producer since inception as a Formal Training Unit in 1998, even training other Active Duty instructors from Luke AFB in Night Vision Goggles (NVG) when the Air Force could not meet their own requirements.
  13. Springfield-Beckley MPT AGS graduates its F-16 students in 16 fewer training days than does the Active Duty using an imbedded syllabus; the result is a graduate fully qualified in Targeting Pod (TGP) employment who needs only one home station certification flight to become an NVG combat wingman. As a result of our incredible efficiency, Springfield-Beckley MPT AGS was only credited for producing one student per syllabus. In contrast, Luke AFB, which re-enrolls their students twice in order to complete two additional follow on courses (TGP and NVG) was credited for three times the student flow as Springfield-Beckley MPT AGS. This is hardly fair since we produce a more combat capable student in a shorter time period using a more effective syllabus. The superior experience level of our Instructor Pilots and maintenance personnel makes all of this possible, and the resulting UTE rate detailed herein. In stark contrast, the Active Duty chose not to adopt our approach given their lesser experience levels among Instructor Pilots and maintenance personnel – a testament to our ability to excel on many levels.

## **Establish Centers for Rotary Wing Air Platform Development & Acquisition, Test & Evaluation**

### **BRAC Recommendation**

Realign Wright Patterson Air Force Base, OH, by relocating Air Force Materiel Command V-22 activities in rotary wing air platform development and acquisition to Patuxent River, MD. Realign the Naval Air Engineering Station Lakehurst, NJ, by relocating activities in rotary wing air platform development, acquisition, test and evaluation to Patuxent River, MD. Realign Ft. Rucker, AL, by relocating the Aviation Technical Test Center to Redstone Arsenal, AL, and consolidating it with the Technical Test Center at Redstone Arsenal, AL. Realign Warner-Robins Air Force Base, GA, by relocating activities in rotary wing air platform development and acquisition to Redstone Arsenal, AL.

### **DAYTON REGION RECOMMENDATION**

The Dayton Region supports this BRAC Recommendation. The Aeronautical Systems Center (ASC) at WPAFB is well positioned today to meet the directive from the BRAC commission to become a Joint Center for Fixed Wing Air Platform R, D, & A and T&E. Today, the management these critical functions is already provided by the System Program Offices (SPOs) at ASC for the majority of the Air Force's fixed wing air platforms. Over the past three decades, the co-location of the SPOs at ASC with the research activities conducted at the Air Force Research Laboratory (AFRL), also located at WPAFB, has proven to provide a critically important and synergistic benefit, speeding technology transition from the research phase to the implementation into these aircraft platforms. Locating additional Fixed Wing Air Platform acquisition activities at WPAFB will increase this very valuable synergistic effect.

The R, D, & A and T&E infrastructure in terms of acquisition culture, intellectual expertise, and physical facilities is already present at WPAFB. Such a consolidation, as recommended to the Defense Base Closure and Realignment Commission, can be accomplished with a comparatively minimum amount of effort and disruption to ongoing programs. WPAFB is ready today to accept this expansion of its core mission, which will have extensive benefits for programs across all of our military services.

**BRAC Justification:** This Air Land Sea & Space (ALSS) recommendation realigns and consolidates those activities that are primarily focused on Rotary Wing Air Platform activities in Development, Acquisition, Test and Evaluation (DAT&E). This action creates the Joint Center for Rotary Wing Air Platform DAT&E at the Redstone Arsenal, Huntsville, AL, and enhances the Joint Center at the Naval Air Warfare Center Aircraft Division (NAWCAD), Patuxent River, MD. The end state of this recommendation builds upon existing rotary wing air platform technical expertise and

facilities in place at the two principal sites and provides focused support for future aviation technological advances in rotorcraft development.

The planned component moves enhance synergy by consolidating rotary wing work to major sites, preserving healthy competition, and leveraging climatic/geographic conditions and existing infrastructure, minimize environmental impact. These consolidations co-locate aircraft and aircraft support systems with development and acquisition personnel to enhance efficiency and effectiveness of rotary wing air platform design and development activities.

**Payback:** The total estimated one-time cost to the Department of Defense to implement this recommendation is \$49.4M. The net of all costs and savings to the Department during the implementation period is a cost of \$40.2M. Annual recurring savings to the Department after implementation are \$2.8M with a payback expected in 26 years. The net present value of the costs and savings to the Department over 20 years is a cost of \$11.8M.

**Economic Impact on Communities:** Assuming no economic recovery, this recommendation could result in a maximum potential reduction of 108 jobs (59 direct jobs and 49 indirect jobs) over the 2006-2011 period in the Dayton, OH, Metropolitan Statistical Area, which is less than 0.1 percent of economic area employment;

Assuming no economic recovery, this recommendation could result in a maximum potential reduction of 24 jobs (13 direct jobs and 11 indirect jobs) over the 2006-2011 period, in the Edison, NJ, Metropolitan Division, which is less than 0.1 percent of economic area employment.

Assuming no economic recovery, this recommendation could result in a maximum potential reduction of 607 jobs (327 direct jobs and 280 indirect jobs) over the 2006-2011 period, in the Enterprise-Ozark, AL, Micropolitan Statistical Area, which is 1.3 percent of economic area employment.

Assuming no economic recovery, this recommendation could result in a maximum potential reduction of 82 jobs (50 direct jobs and 32 indirect jobs) over the 2006-2011 period in the Warner Robins, GA, Metropolitan Statistical Area, which is 0.1 percent of economic area employment.

Source of Numbers	2006-2011 Period		
	Direct Job Reductions	Indirect Job Reductions	Total
BRAC Report	(59)	(49)	(108)
Local Validation	(59)	(49)	(108)

The aggregate economic impact of all recommended actions on these economic regions of influence was considered and is at Appendix B of Volume I.

**Community Infrastructure Assessment:** A review of community attributes indicates no issues regarding the ability of the infrastructure of the communities to support missions, forces, and personnel.

**Environmental Impact:** This recommendation may have a minimal impact on cultural, archeological, and tribal resources and threatened and endangered species at both Patuxent River and Redstone Arsenal. Increased noise from aviation operations may result in operational restrictions on Redstone. Further evaluation is required. This recommendation has no impact on air quality; dredging; land use constraints or sensitive resource areas; marine mammals, resources, or sanctuaries; waste management; water resources; or wetlands. This recommendation will require spending approximately \$0.5M for environmental compliance activities. The payback calculation includes this cost. This recommendation does not otherwise impact the costs of environmental restoration, waste management, or environmental compliance activities. The aggregate environmental impact of all recommended BRAC actions affecting the bases in this recommendation have been reviewed. There are no known environmental impediments to implementation of this recommendation.

## **Joint Centers of Excellence for Chemical, Biological, and Medical Research and Development and Acquisition**

### **BRAC Recommendation**

Realign Naval Air Station Pensacola, FL, by relocating the Naval Aeromedical Research Laboratory to Wright-Patterson AFB, OH.

### **DAYTON REGION RECOMMENDATION**

The Dayton Region supports this BRAC Recommendation. The Ohio's extensive professional and academic, medical infrastructure is prepared to welcome and support the realigned mission, as well as to facilitate the critically important transition to a Joint Center.

**BRAC Justification:** This recommendation creates Joint Centers of Excellence for Battlefield Health and Trauma research at Fort Sam Houston, TX; Infectious Disease research at Walter Reed – Forest Glenn Annex, MD; and Aerospace Medicine research at Wright Patterson AFB, OH. These actions will increase synergy, focus on joint needs, and efficient use of equipment and facilities by co-locating Tri-Service and Defense activities performing functions in chemical-biological defense and medical RDA. The realignment of Air Force Aerospace medical and non-medical R&D to Wright Patterson AFB, OH, with co-location of associated education and training activities relocated in another recommendation, makes this location most suitable for a joint center for Aerospace Medical Research. Specific benefits occurring as a result of this recommendation include:

- Promote beneficial technical and management interaction in the functional research areas of combat casualty care including combat dentistry and maxillofacial care, infectious disease, aerospace medicine, medical and non-medical chemical and biological defense research, as well as in the functional area of medical development and acquisition, fostering a joint perspective and sharing of expertise and work in areas of joint interest. Build joint economies and optimize use of limited pools of critical professional personnel with expertise in unique mission areas.
- Co-location of combat casualty care research activities with related military clinical activities of the trauma center currently located at Brooke Army Medical Center, Fort Sam Houston, TX, promotes translational research that fosters rapid application of research findings to health care delivery, and provides synergistic opportunities to bring clinical insight into bench research through sharing of staff across the research and health care delivery functions.

The availability of a co-located military trauma center also provides incentives for recruitment and retention of military physicians as researchers, and is a model that has proven highly successful in civilian academic research centers.

- Reduce the number of DoD animal facilities.
- Provide increased opportunities to share management and scientific support functions across Services and reduce costs.
- Foster the development of common practices for DoD regulatory interactions with the U.S. Food and Drug Administration.
- Facilitate coordinated medical systems lifecycle management with the medical logistics organizations of the Military Departments, already co-located at Fort Detrick.
- Promote jointness, enable technical synergy, and position the Department of Defense to exploit a center-of-mass of scientific, technical, and acquisition expertise with the personnel necessary to provide defense against current and emerging chemical and biological warfare threats.
- Complete earlier consolidations of military Service Chemical Biological Defense programs into a joint, consolidated Chemical Biological Defense program.
- Directly support the Department's Strategy for Homeland Defense and Civil Support.

**Payback:** The total estimated one-time cost to the Department of Defense to implement this recommendation is \$ 73.9M. The net of all costs and savings to the Department during the implementation period is a cost of \$45.9M. Annual recurring savings to the Department after implantation are \$ 9.2M with a payback expected in 7 years. The net present value of the costs and savings to the Department over 20 years is a savings of \$46.0M.

**Economic Impact on Communities:** Assuming no economic recovery, this recommendation could result in a maximum potential reduction of 269 jobs (151 direct jobs and 118 indirect jobs) over the 2006-2011 period in the Bethesda-Frederick-Gaithersburg, MD Metropolitan Division, which is less than 0.1 percent of economic area employment.

## BRAC Commission AFIT/NPS/DLI Inquiry

What consideration was given to the closure or realignment of the Air Force Institute of Technology at Wright-Patterson AFB, OH and the Defense Language Institute at Monterey, CA, with Naval Postgraduate School at Monterey, CA, to create a consolidated professional development education center?

### DAYTON REGION RECOMMENDATION

Retain the Air Force Institute of Technology at Wright-Patterson Air Force Base

### HIGHLIGHTS OF ANALYSIS

- The one-size-fits-all military value analysis fails to identify and evaluate the actual military value of either AFIT or NPS. The random criteria fails to evaluate the important issues on which a decision should be based.
- DoD BRAC analysis substantially deviated from Selection Criteria 1 to 4 in assessing Military Value.
  - Distance from DC was a measure
    - NPS 2916 miles
    - AFIT 474 miles
    - **Both NPS and AFIT received the same score**
- DoD BRAC analysis did not capture the military value of the cost avoidance of student and faculty research provided at each installation. (\$29.6 million for AFIT in 2004<sup>1</sup>)
- DoD BRAC did not analyze the military value of Graduate Education (AFIT) located on a multi-mission base with an active runway, research, acquisition, intelligence, and other missions synergistic with graduate education versus a single-mission base (NPS).
- Cost comparisons between Monterey and Dayton were not fully identified and accounted for in measuring Military Value.
- The cost / benefit ratio at AFIT is extraordinary and not captured in BRAC Data.
  - Recent GAO Report indicated:
    - Closing AFIT would yield only \$8 Million per year
    - Closing NPS at its stand-alone base would save \$90 million per year.
    - A savings of \$90 million per year equates to over \$1.1 Billion over 20 years
    - This sum would place closing NPS at #15 in DoD savings for this 2005 BRAC round.

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<sup>1</sup> Air Force Institute of Technology Research Report 2004, page 4.

- DoD BRAC analysis did not evaluate the military value of close community academic ties such as the Dayton Area Graduate Studies Institute (DAGSI).
- AFIT's Negative Capacity was partially due to inability to count AFIT's building under renovation and the use of the projected GE Student load based on SAF Roche's (an NPS Graduate) Vector Blue GE goal of 1197 by 2007. The analysis grossly overestimated the number of students and underestimated the current graduate footprint.

## RATIONALE

1. If the Defense Base Closures and Realignment Commission considers consolidation of Professional Development Education, the 'best choice' option is to create a Defense Professional Development Education Center at Wright-Patterson Air Force Base, Ohio.
2. Professional Development Education evaluations were conducted for the 2005 BRAC Commission and DOD by the Education and Training Joint Cross-Service Group (E&T JCSG). Several scenarios were developed and evaluated. Scenario 0022, "Disestablish AFIT graduate education function at Wright-Patterson AFB. Consolidate AFIT graduate education function with Naval Postgraduate School, Monterey, CA." The E&T JSCG, after reviewing the analysis, disapproved this scenario as a candidate recommendation
3. The recommendation to realign AFIT with NPS at Monterey, California does not adequately address the differences in cost of operations between the Monterey, CA, and Wright-Patterson AFB, OH sites. Additionally, it does not address the positive educational impact of the AFIT students' ability to work directly with the Air Force's researchers, engineers and acquisition specialists at Wright-Patterson. Much of the \$29.6M in research value is made possible by the close access of AFIT to the AFRL and AFMC facilities, so it is feasible this might be lost and should be considered as a cost of moving. Historically, fewer people move from a low cost area to a high cost area. The Naval Postgraduate School is a 'stand-alone' facility in an extremely high-cost location while the Air Force Institute of Technology's location at Wright-Patterson Air Force Base is located in a lower cost area. The majority of AFIT's senior, nationally recognized faculty would likely not transfer to NPS; this becomes a loss to the Air Force.
4. According to the Navy's Special Assistant for BRAC, the Chief of Naval Operations did not want to lose the synergy and interaction between U.S. and foreign students who attended the postgraduate school (Source: GAO Report 05-785, education and Training joint Cross-Service Group Selection Process and Recommendations.) However, synergy for students at the Air Force Institute of Technology means not just working with foreign students, but working together, on site, with the Aeronautical Systems Center program

offices, five directorates of the Air Force Research Laboratory, the Air Force Security Assistance Center, the National Air and Space Intelligence Center, the Major Shared Resource Center (Super Computer), and the Dayton Area Graduate Studies Institute, to name a few. Additionally, AFIT has research laboratories embedded within the school. Therefore, Wright-Patterson adds best military value to the aforementioned economic best value.

5. Several other facts illustrate why consolidating AFIT at NPS would not make sense from either business or quality of life perspectives. Medical care is limited with active duty personnel treated at the Presidio of Monterey (Defense Language Institute). Sick call is by appointment only and the pharmacy has limited stock. TRICARE facilities in the area are limited. Currently, students and faculty must drive long distances to locate TRICARE (medical) suppliers. Adding significant Air Force student loads and additional faculty will only magnify this already-taxed quality of life issue. Housing in the Monterey area is expensive. According to the Monterey County Association of Realtors (see charts below), the average price of a Carmel home during the January – June 2005 was \$1.930 million. Pebble Beach homes averaged \$2.150 million during the same time period, while homes in Carmel Valley sold for an average price of \$1,235,400. Data indicate prices averaging over \$700,000 (with most higher) for a three bedroom, one bath home (Monterey, \$885,000 median, \$934,910 average; Carmel, \$1.580 million median, \$1.93 million average; Pacific Grove, \$840,000 median, \$949,000 average; Seaside, \$647,000 median, \$668,000 average; Marina, \$650,000 median, \$665,000 average. The *Dayton Daily News*, July 11 (Jill Barton, Associated Press) states that housing in all of California is averaging \$552,000. There are some condos/townhouses available in the \$300 – 500,000 range. Base housing assignments are determined by military rank, leaving younger students and PCS members challenged in this high cost environment. Most permanent personnel supporting NPS drive long distances just to find affordable housing. This option not only takes valuable time away from their families, but also is draining personal budgets (with the price of gasoline). This also does not take into account the economic opportunity cost to the nation of the NPS housing or the base. Each house, as-is, probably worth \$600-800,000 on the private market and the base is worth hundreds of millions, if not over a billion. The DOD is basically “spending” this much to use this property, instead of converting it to a more valuable use (sell it and move NPS to a lower valued area) .

Source: Monterey County Association of Realtors

January - June 2005 Monterey County Single Family

County	Area/ City	Year	Cur Inv	No. of Closed Sales	%LP Rec'd	Med. Price	Avg. Price	Total Vol / 1000	Avg DOM	New Listings
MTY	CAR	2005	126	122	93.98	1,580,001	1,930,095	235,472	128	181
MTY	CV	2005	73	75	94.26	1,150,000	1,235,400	92,655	96	123
MTY	DR	2005	9	14	97.78	715,000	727,057	10,179	72	14
MTY	ES	2005	45	95	100.09	485,000	475,497	45,172	36	130
MTY	MA	2005	33	65	99.32	650,000	664,598	43,199	33	92
MTY	MO	2005	54	83	96.90	885,000	934,910	77,598	67	120
MTY	NOM	2005	148	163	99.22	685,000	727,163	118,528	53	294
MTY	NS	2005	190	390	100.10	576,500	595,337	232,181	28	566
MTY	PB	2005	61	60	92.19	1,600,000	2,150,161	129,010	140	93
MTY	PG	2005	53	66	97.82	840,000	948,899	62,627	54	101
MTY	SCT	2005	38	16	93.91	2,300,000	2,674,219	42,798	131	39
MTY	SEA	2005	76	113	98.85	647,500	667,773	75,458	40	190
MTY	SMH	2005	108	106	94.56	915,000	1,267,629	134,369	99	188
MTY	SOM	2005	105	215	97.72	451,000	475,360	102,202	40	325
MTY	SS	2005	108	170	99.02	559,000	576,892	98,072	34	268
MTY	UN	2005	*	*	*	*	*	*	*	*
<b>Totals</b>										
		2005	1227	1,753	96.68	635,000	855,396	1,499,509	56	2,724

\* = Not Available

January - June 2005 Monterey County Condos/Townhomes

County	Area/ City	Year	Cur Inv	No. of Closed Sales	%LP Rec'd	Med. Price	Avg. Price	Total Vol / 1000	Avg DOM	New Listings
MTY	CAR	2005	6	9	98.53	679,000	701,722	6,316	32	11
MTY	CV	2005	12	29	97.94	610,000	631,957	18,327	78	32
MTY	DR	2005	1	4	99.69	430,000	445,250	1,781	12	7
MTY	ES	2005	8	28	98.55	310,000	321,179	8,993	34	33
MTY	MA	2005	2	16	100.34	409,900	428,113	6,850	12	23
MTY	MO	2005	22	28	98.99	577,000	573,882	16,069	33	51
MTY	NOM	2005	*	4	94.96	1,375,000	1,466,000	5,864	110	1
MTY	NS	2005	18	49	100.21	338,000	339,926	16,656	37	61
MTY	PB	2005	3	13	95.16	780,000	1,333,885	17,341	76	9
MTY	PG	2005	3	6	97.77	635,000	645,250	3,872	30	7
MTY	SEA	2005	4	4	99.58	535,000	587,000	2,348	13	9
MTY	SMH	2005	2	3	99.87	645,000	631,633	1,895	6	5
MTY	SOM	2005	11	16	99.53	305,000	298,806	4,781	27	26
MTY	SS	2005	7	17	101.19	395,000	398,965	6,782	16	24
MTY	UN	2005	*	*	*	*	*	*	*	*
<b>Totals</b>										
		2005	99	226	98.37	409,900	521,563	117,873	39	299

\* = Not Available

- The Air Force Institute of Technology, an integral part of Wright-Patterson Air Force Base, has all the support typical of a large military installation. In addition, the Dayton-Springfield metropolitan area offers traditional advantages of a supporting community: moderate cost of living, short commuting distances, outstanding health care options, exceptional educational systems, superb child care, recreation to fit everyone's needs, and centrally located and in easy reach of most destinations:

**Distance from AFIT (in miles):**

Dayton International Airport, OH .....	15
Cincinnati International Airport, OH.....	72
Columbus International Airport, OH.....	70

Dayton International has more than four times the daily flights than Monterey and has direct flights to most major cities east of Denver. The Monterey Airport only connects with Los Angeles, San Francisco and San Jose. San Jose is a better comparison, yet it has no more access than Dayton.

7. As the following examples show, AFIT responds to changing Air Force and Defense needs by tailoring resident graduate and continuing education programs to fast-changing requirements and needs, and does so in a much shorter timeframe than possible in civilian universities:
  - Intermediate Development Education (IDE) programs (this the AF's Joint Air Command and Staff students—JPME) developed and delivered within six months of request – graduates available within eighteen months of request.
  - Systems Engineering (SE) Program redesigned in less than a year with both graduate degree and certificate programs, resident and by distance learning, available and being awarded.
  - During the past four years, five Centers of Excellence have been developed at AFIT, each with a specific defense focus
    - **Measurement and Signature Intelligence (MASINT)** – A growing and increasingly important intelligence area which includes significant classified content (which is not normally available in civilian universities) – this program receives strong support from NGA, NRO, CIA, DIA, and NASIC
    - **Information Security** – Encompasses info security, info operations and info warfare. Many civilian universities are involved in developing the technology to defend computer systems and networks, however none are involved in developing capabilities to disrupt and exploit enemy systems and networks – this program receives strong support from NSA, AFIWC, and 8<sup>th</sup> AF
    - **Directed Energy** – Focused on the development of high-energy lasers and microwave weapons systems
    - **Systems Engineering** – Focused on systems architecture and capabilities planning – developing an officer corps with the ability to do effects and capabilities based planning
    - **Operational Analysis** – Focused on Modeling and Simulation and the analysis tools to improve operations. A steady stream of military faculty from this area have deployed in support of OIF to supply analysis support for the current conflict in Iraq

- AFIT is currently performing over four hundred research efforts annually– DOD customer surveys rank 90% as significant or highly significant.<sup>2</sup>
8. AFIT is part of the Dayton Area Graduate Studies Institute (DAGSI), a consortium of graduate engineering schools at the University of Dayton, a private institution; Wright State University, a state-assisted institution; and the Air Force Institute of Technology, a federal institution. DAGSI integrates and leverages the combined resources of the partnership, including faculty, facilities, equipment, and other assets of the institutions. The DAGSI partnership, which includes The Ohio State University and the University of Cincinnati as affiliate members and Miami University as an associate member, effectively expands regional educational and research opportunities at the masters and doctoral levels of engineering and computer science. DAGSI's ultimate objective is to support economic growth and development in Ohio by strengthening the intellectual infrastructure supporting the state's high-tech workforce. This academic partnership is second-to-none in the industry and offers AFIT students another dimension in advanced educational opportunities.
  9. AFIT is located in the "Center of Invention and Innovation," the Dayton and Wright-Patterson community. It is a premiere, education and technical research-focused complex offering state-of-the-art facilities with more than 490,000 square feet of academic, research, and administrative space. Ample land is available for future growth in and around the campus and Wright-Patterson Air Force Base. Correspondingly, Wright-Patterson AFB provides a robust environment for AFIT with support from the Air Force Research Laboratory, Headquarters Air Force Materiel Command, Aeronautical Systems Center, National Air and Space Intelligence Center, Air Force Security Assistance Center, and the Major Shared Resource Center (a DOD supercomputer facility).

### **Bottom line**

***The Dayton Region Recommends Retaining the Air Force Institute of Technology at Wright-Patterson Air Force Base (AFB), Ohio***

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<sup>2</sup> Air Force Institute of Technology Research Report 2004, page 4

## TEN TOP REASONS TO KEEP AFIT

*The mission of AFIT is to provide defense-focused graduate and continuing education, research and consultation to improve Air Force and joint operational capability.*

1. AFIT provides graduate programs in science, engineering, and management specifically tailored to meet Air Force requirements. Each program is aligned with a specific Air Force Educational Code, and is subjected to periodic program reviews by users and senior AF leadership.
2. AFIT provides rapid and flexible response through creation, approval and implementation of new courses and curriculum on time scales of weeks or months, rather than years.
3. The faculty of AFIT consists of approximately 60% AF officers of which 95% have PhDs. Many of the civilians have prior military service. This unique attribute of the institution exposes its graduate students to military knowledge and experience base equaled nowhere else.
4. The results of AFIT student research is evaluated annually by AF sponsors. The total cost-avoidance to the Air Force for this work (evaluated by customers at \$29.6 million for FY 2004) is greater than the cost of operating the graduate programs.
5. Virtually all faculty research is in support of a current AF requirement, adding significantly to the AF R&D effort. In consequence, some 90% of student research is also in support of an AF requirement.
6. The convenient access to the laboratories and offices of Wright-Patterson AFB enables students to perform their required research with AF engineers and scientists, and to apply AF facilities to the solution of problems of current AF interest.
7. The effectiveness of AFIT in meeting its mission is significantly enhanced by the outstanding support provided to students and staff by the Wright-Patterson community. The technical library of Wright Patterson has been merged with the AFIT collection. A substantial amount of base housing is available, and the Wright-Patterson Hospitals are among the largest, best equipped, and best staffed in the Air Force. These factors alleviate students, especially those with families, from many of the distractions encountered elsewhere.
8. The cost of living in the Wright-Patterson is a relatively low, and AFIT is within convenient driving distance of suitable housing for young officers. One index of this factor is the Basic Housing Allowance, FY 2005 rates. For a Captain (O-3) with dependents, this is \$1101 /month at WPAFB, \$1628/month in Ann Arbor, \$2291/month in Monterrey and. Relocation of AFIT to a higher cost area, or dispersal to academic institutions of high quality, could cost the DOD significantly

through this compensation, and, quite likely, leave students with considerable financial strain resulting from higher uncompensated expenditures.

9. Not only does AFIT fill a critical role in the nation's defense, it is an important component of a world-class knowledge base in defense-related technology and management from which the State of Ohio benefits. It has contributed significantly to making the State of Ohio and the WPAFB community the world leaders in aerospace research and development, and in the provisioning and application of aerospace systems

10. The AFIT faculty is the largest component of the three full-member institutions in DAGSI. The resulting consortium provides the Dayton and Wright-Patterson community with access to courses from and research with over 200 faculty members, and provides access for civilian students to AFIT courses and degrees. This activity, funded by the State of Ohio, is critical to the economic development of the region.

*AFIT symbolizes the commitment, present from the creation of the United States Air Force, to the technically educated officer corps that is necessary to develop, acquire, maintain, and operate the most technically advanced weapons systems upon which the Air Force mission depends.*

### **How to Evaluate Military Value Analysis**

The military value analysis is flawed at best and probably misnamed. At best this is some sort of operational effectiveness or efficiency evaluation. **There is little or no consideration of military value.** Further, the attributes and measures appear to have little connection to the military value factors cited by Acting USD Wynne.<sup>3</sup>

Besides the fact that the metrics failed to fully consider military value, that much of the input data was wrong and that the analysis was wrong—it only considered the static comparison of WPAFB vs. NPS as is. To do it right, you would need to do this for all options—full privatization, consolidate at NPS, consolidate at AFIT, etc.... Once done correctly, you then need to compare all options. To just look at this static case is meaningless.

The committee's desire to close or realign graduate education must consider the core purpose of such education. It is not merely to learn the fundamentals of a technical field of study—that can be done at any good state university at a lower cost to the DoD. The core purpose of military graduate education is to focus that education on the core needs of the military and to create and maintain a culture that reinforces these key military goals and objectives. This can only be done in a military environment with military faculty and access to military infrastructure.

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<sup>3</sup> Policy Memorandum Two—BRAC 2005 Military Value Principles, dated Oct 14, 2004.

There are also some significant differences between Army, Navy and Air Force focused graduate education that a joint school would need to consider.

Focused military graduate education is extremely valuable to the services and is also expensive. Any school that focuses its resources on one industry (the military) in order to produce mission-ready graduates will be far more costly than a generic public institution. Using cost per student as a metric, is illogical and an incredibly faulty comparison. AFIT has been reviewed many times, and its Board of Visitors (BOV) has always determined that the investment the Air Force makes in military graduate education provides an impressive return. Recent reports have stated “While there is a premium to be paid to maintain AFIT, the BOV is unanimous in its belief that there is a richness to the return on investment that cannot be achieved at more traditional civilian educational institutions<sup>4</sup>.”

There is significant value in the graduate programs that contribute to the full military value of AFIT. AFIT is unique in at least four core areas: course work, research military environment and defense focused centers.

**Coursework:** All of AFIT’s programs go through a rigorous review process both for course content and inclusion in the program. Included in this review are the program’s sponsors which are Air Force organizations outside of AFIT. These operational sponsors support and receive not only the research, but the graduates themselves as future staff officers. They have a unique view of the Air Force needs that must be addressed by graduate education. This review allows for frequent adjustments to curriculum. This is almost impossible to achieve in a civilian institute. AFIT faculty has the capability to create unique, focused coursework that is coordinated and supported by the Air Force’s laboratories, program offices and operational units. Specific courses range from aerospace cost estimating, high-energy laser weapons, target recognition, low observables, and stealth to unmanned aerial vehicles. This allows the students to study and solve problems that are focused and relevant to the Air Force. AFIT courses are also unique due to the predominately military faculty and their experienced civilians. Like any civilian school, there are also requirements for some background courses that are similar (if not identical) to course taught at civilian universities. The faculty brings a military focus to the course work (even the generic courses) that is unavailable at most civilian institutions.

**Research:** Over 90% of AFIT’s thesis and doctoral research is sponsored by Air Force or DoD organizations. This research supports current operational, acquisition and development needs that all benefit the Air Force and DoD. Recent estimates show that this provided benefits to the customers of over \$29.6M per year.<sup>5</sup> Post-thesis comments from the sponsors indicate that they would have had to fund this research themselves from other sources had it not been supplied by AFIT. Could this be done by Air Force students at civilian schools---unlikely. Most civilian

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<sup>4</sup> Report of the Air Force Institute of Technology Board of Visitors, March 1996

<sup>5</sup> Air Force Institute of Technology Research Report 2004, page 4

schools lack the system-unique facilities and laboratories available to AFIT students at WPAFB. AFIT students have easy access to all the Air Force Research Laboratories both at AFIT and at other AFMC locations. Students also have access to the acquisition program offices and to higher headquarters. AFIT students have the luxury of working with faculty who have active research streams with these laboratories, program offices and headquarters. The access to experienced faculty provides quick access to these facilities. Students at civilian institutes would have a very difficult time gaining access for themselves (if only the travel and scheduling problems) along with gaining access for their civilian professors. And finally, professors at civilian institutes are unlikely to devote time to directing student research unless research funding is provided.

**Military Environment:** Maintaining a military graduate institute on a military base, surrounded by military students and staff, provides significant military cultural and technical support. A major benefit of attending AFIT is the incredible knowledge gained from fellow officers and Air Force civilians. This allows them to learn about other career fields and how their graduate studies relate to other military areas. Another major advantage is the access to military facilities, laboratories and personnel. None of these exists at civilian schools.

**Defense Focus:** In addition to the AFIT resident school and its resources, other unique facilities and capabilities exist that directly focus on military issues. There is also the Center for Systems Engineering provides Air Force wide support. There are also a multitude of unique laboratories and Centers of Excellence that AFIT students and faculty utilize and support. Four department level Centers of Excellence exist today:

1. Measurement and Signature Intelligence
2. Information Security
3. Directed Energy
4. Operational Analysis

Wright-Patterson AFB provides a robust environment for AFIT with support from the Air Force Research Laboratory, Headquarters Air Force Materiel Command, Aeronautical Systems Center, National Air and Space Intelligence Center, Air Force Security Assistance Center, and the Major Shared Resource Center (a DOD supercomputer facility).

### **Critique of The Military Value Analysis**

In general, calculations are **not consistent**. Worse, they don't really cover all aspects of military value even those discussed in the Military Value Analysis Report, July 2005, pages 9-14.

#### Attribute Location

L1 Distance from Washington DC: WPAFB is a one hour flight to the Pentagon, so a round trip can be accomplished in one day. Monterrey is a five to six hour flight requiring an overnight stay at a minimum. To show them as equal at 0.1 totally ignores the relative ease of a Dayton departure versus the congested San Francisco region.

L2 Distance to nearest large airport. WPAFB is less than fifteen miles to Dayton International airport with access worldwide. (We assume they are not using Dayton, but rather Cincinnati or Columbus) While not a major hub, the easy access offsets in advantage of the SFO or San Jose airport advantages. The calculations don't appear to follow their linear methodology. Also, the drive to Dayton International takes significant less time per mile than any drive to a San Francisco regional airport.

L3 Distance from Service Research Center of Excellence. The narrow definition of this category makes this a meaningless factor for both NPS and AFIT. Does the insertion of the word "research" open this up to the labs and research centers at WPAFB? If that is the intended definition, then AFIT should receive maximum points. A better metric would have been distance to laboratories and research centers that are relevant to graduate education.

L4 Distance from Civilian Research Center: Obviously WPAFB has Wright State, University of Dayton within five miles. Ohio State, Cincinnati, Miami University are all located within 100 miles. Obviously NPS has many schools within 100 miles. The scoring makes no sense since NPS got 3 raw points and WP got 2, but the military value in 3.0 and 2.985? Not linear.

Summary: AFIT should have won this by a large margin.

## **Educational Output**

Student Capacity: Is this used with the other capacity calculations? There is a concern that you are double counting (or penalizing) capacity metrics. Another concern is that these should be metrics for a school's efficiency, not necessarily measuring gross output. This should not mix gross metric with individual metrics. The point is that a poorly utilized and inefficient school can still have a large output.

EO1 Resident Student Load. Appears okay.

EO2 JPME % Definition not clear, but we assume this means did students complete appropriate level of JPME during assignment. This does not consider AFIT's new IDE program that moves up to 200 **Air Command and Staff students** to AFIT for a graduate degree and completion of JPME. This also does not consider students who completed JPME by correspondence or seminar. This accounts for approximately 40% of the graduating class. AFIT should have received a military value score of 2.4.

EO3 Military Specific: Not clear on definition and it's likely this should be a wash between the schools.

EO4 # of AY Degrees: Should the metric be total gross students or should it be what fraction of your services graduate education requirement did you meet? Should you look at productivity?

NPS should be ahead on this only because of their larger number of graduates, the rest is likely a wash.

### **Facilities**

The analysis is incorrect both in the inputs and calculations.

F1 Expandability. The AFIT score does not seem to be calculated correctly. Additionally, it's not clear what the rationale is for needing 150 acres. This is inconsistent with any reasonable school expansion.

F2 Total square feet of existing C1 and C2 PDE space: Does this duplicate the capacity metric considered in the separate capacity analysis?? Does this include all of the classroom buildings (ie, 640, 641, etc) and support. The raw data for AFIT seems low, but the ratio to NPS may be correct.

F3 Number of commands and organizations on the installation that provide mutual support to the graduate institution: This is totally wrong. WPAFB is home to AFMC, ASC, NAIC, AFRL, dozens of program offices, etc that all support AFIT and benefit from their research and education services. There are very few comparable organizations at NPS. AFIT should get the maximum points and NPS should get zero.

F4 Specific Research Labs (not able to outsource) Not clear what the raw data represents or what labs they even included. The military score for the Navy is not calculated correctly (assuming the raw score is even right).

Our major concern is that this section fails to give AFIT credit for the major laboratories and research centers. It possibly fails to take into consideration all of AFIT's facilities.

### **Educational Staff**

ES1 % of military faculty: This supports the concept that a military culture is important. The weighting factor should be higher since military presence is a major benefit of military graduate education and military value.

ES2 % of civilian admin support (reduced mil manpower): This shows AFIT at 36% civilian support, this is apparently wrong. AFIT does not have 64% military in admin support positions. AFIT is probably no more than 20% military admin support. Need to determine definition and how they consider contractor support in this analysis. This is a case where you should use the absolute number of military.

ES3 Education Admin to student ratio: Both schools have very small admin support staffs, so you reach a point of diminishing returns in servicing the students. According to this metric, if you went to zero support, you maximize military value. That's ridiculous. AFIT has a one-to-five ratio while NPS has a one-to-twenty-five ratio. It's obvious that the AFIT students get far better service and support. This is a poor metric of military value and appears to be wrong. The military value points are also calculated wrong.

ES4 % of faculty with PHDs: Okay.

ES5 Faculty to student ratio (measure of educational value): This makes no sense. The metric as defined says that your military value increases as the faculty to student ratio decreases. Thus at zero faculty you maximize the points. This seems wrong and the computation is backwards.

### **Quality of Life**

This is a rather poor attempt to quantify the quality of life. Where is the comparison of costs to the student? Where is the comparison of costs to the government (BAH). What percentage of students live on base—a key factor for NPS, less of one for AFIT. What is the quality of the schools, the shopping, the commute, etc.

QL1 % of student billeting facilities that meet DOD standards: This is an obvious error. WPAFB has over 1000 units of which AFIT has a reserved number for each class. Currently there is an excess of available units over demand. There is a large number of Dayton communities with outstanding housing at a third of the cost of comparable NPS area housing. The zero score is an obvious mistake. Dayton has a totally different housing market than NPS and this doesn't capture that fact about the cost or quality of life issues. We think that NPS claims all their housing (less faculty/staff set asides) is reserved for students---of course it is, there is no one else eligible. AFIT students do receive some consideration (the housing office in the past has set aside 50-100 units for AFIT). These are not permanent student housing. The other issue is that AFIT's program is only 18 months, so the start and end times don't coincide for easy transfer from old to new students.

QL2 Hospital or Clinic: The scoring fails to capture the benefit of a large regional hospital compared to a small clinic. The regional hospital has dozens of specialists and significant capacity to handle almost all student and family needs.

QL3 Dental Clinic: Okay, but the waiting is wrong. In no way is the value of dental clinic equal in value to a major regional hospital. These should be lumped together or else change the weighting.

QL4 Civilian higher education opportunities: Yes—this fails to capture the low cost and easy access of all the universities in the Dayton region.

QL5 Average wait time for on-base housing: This appears to give more points for the same metric as in question one above. This is not a fair metric for Dayton. Most students either take a housing unit upon arrival or leave their name on the list and sign a lease in the community. Base housing in the Dayton area does not carry the same level of importance as it does in the NPS area. The scoring algorithm is wrong, it provides zero military point if the wait time is greater than zero for one and zero for the other. We find it hard to believe that NPS always has on base housing for each incoming student. That's ridiculous.

QL6 Child Care average wait time: Okay—Not only does AFIT have a major child care center next door to the school, but its cost is likely cheaper than Monterey. There are also numerous high quality childcare centers throughout the Dayton region at reasonable prices.

QL7 Commissary: Okay

QL8 Civilian Locality % Pay: AFIT is cheaper. Okay.

### **Summary**

A cursory attempt to correct the AFIT data, some other obvious scoring errors and a broader interpretation of the attribute measures indicates a different outcome. Making the changes indicates that the military value of the two schools is closer to a tie and possibly a slight AFIT advantage.

It is always difficult to measure the effectiveness of a military graduate school. But it is definitely a mistake to consider the cost per student as the prime measure of when comparing to civilian institutes or other static metrics. Such savings are of little consequence when compared to effectiveness in winning the next war or defending the nation.

Nowhere in this military effectiveness calculation did they seriously consider the value of the student's education to the military or the institutions contribution to the military. As discussed in the first paragraphs—what is the value of the coursework? The research? The military environment?

## **On Privatizing Graduate Education (Close AFIT and Send Officers to Civilian Universities)**

### **Introduction**

In considering the privatization of the Air Force Institute of Technology, it is necessary to accept the fact that graduate education involves more than class attendance. In study towards the doctoral degree, the research for the dissertation is the essential and defining attribute of the program. Course work serves largely as prerequisite to the research. In programs at the MS level, the coursework is a more significant component, allowing for more specialization in advanced topics of the discipline than at the BS level, but quality MS programs must include the provision for research in the specialty or, in some cases, a challenging design activity requiring the application of knowledge and principles beyond that possible using the baccalaureate background. But, in either case, this experience is the heart of graduate education, and this is especially true of graduate education in science and engineering.

With a few very notable exceptions, the course work available at the Air Force Institute of Technology can generally be obtained at civilian universities, if care is exercised in assigning officers to institutions with strong concentrations in the desired area of specialty. Indeed, while the use of specific Air Force relevant course materials and examples provide students a better preparation for AF assignments, the fundamental difference between an AFIT graduate program and those available at civilian institutions is the research component. And in this regard, it is necessary to that to recognize that two distinctly different forms of privatization are possible. For convenience, these may be termed the “Pre-existing Programs” option, and the “Directed Education Programs” option.

### **Privatization with Pre-existing Programs**

In the first of these, the Pre-existing Programs, the students attend a civilian university and complete the program of study developed by that university for its own customer base, the student may not necessarily be offered the research opportunity, as many institutions have removed the research requirement from programs at the MS level.

In this case the DoD pays the tuition and accepts whatever research the officer can negotiate, if any.

At the first glance, it may appear that this option is certain to have a lower cost than that of operating the Air Force Institute of Technology. However, a careful comparison of the per-graduate cost of operating AFIT shows that that cost is comparable to the tuition charged at the prestigious private institutions, when it is taken into account that the AFIT year is a full twelve months, rather than the nine month academic year. In the case of the Naval Post Graduate School, this may not be the case, as it is understood that the unit cost at NPS is considerably higher, largely

due to the fact that NPS is the only organization on a significant military facility, necessitating that the entire cost of base operation must be amortized over the graduates of the School.

While tuition costs are considerably lower at the major state universities, enabling a cost savings to the DOD, it must be recognized that the total cost of a graduate education at a public institution is not significantly different from that in the private setting. The difference, of course, is the substantial subsidy of the state university by the state government. Thus, privatization of AFIT by sending students to public institutions would constitute transference of the cost of educating Air Force officers from the federal government to state governments.

But one must consider what would be sacrificed in the name of a somewhat questionable cost savings, namely dedicated defense education and research. AFIT has been a quick reactor to emerging defense needs with both new curricula and research. Graduates now report to their next non-operational duty as experts or at least journeymen in some area of defense technology, usually one of direct interest to their job. Further the student research they completed as a part of their graduate program most often contributed in a measurable way to some on-going DoD project or system. This cost of this contribution was embedded in an AFIT degree program, not separately funded. Privatization through this means constitutes a significant mission change.

In previous considerations of privatization, it has been suggested that DoD give the student officers lists of research topics to work on. But this fails to take into account the current climate in American graduate education in science and engineering: graduate students must work on projects their professors are interested in, and Professors are interested in projects for which they can secure grant money. That grant money not only supplements the professors' compensation, but is essential to the development of their (and their Institute's) academic reputations.

### **Privatization through Directed Education Programs**

In the second form of privatization, Directed Education Programs, the DoD would negotiate with the school to ensure DoD directed research opportunities for the officers and a course of studies to support that research. This option would include preserving (at selected civilian schools) a majority of the weapons related curricula now existing at AFIT, coupled with research thesis and dissertation topics of direct DoD interest. During the 1996-1998 consideration of a closure of AFIT, an AFIT team visited nearly a dozen civilian schools to informally explore what they could do in the way of DoD directed programs for officer students. Their responses can be summarized in categories:

Some curricula could be absorbed in current classes.

Some curricula would need a special or dedicated classes requiring subsidy.

Some curricula could not be accepted (e.g. nuclear and directed energy weapons).

No classified classes could be included. Such classes would have to be added by the Air Force after graduation.

In every case, grant money would be necessary to fund dedicated DoD research. When these responses were analyzed in a cost study, the cost was found to be comparable with the operation of graduate programs at AFIT.

Another possible version of privatization of the AFIT graduate education would be that a single school or contractor bid on the entire operation. This was explored (informally proposed) in the 1996-1998 closure initiative by the AFIT group visiting civilian schools. Some schools expressed an interest in cherry picking some, but not all, curricula. Again there was no interest in programs with a heavy defense emphasis, especially those with classified content.

### **Other Factors**

Privatization of AFIT would appear to be subject to OMB directive A-76. That process for privatization sets extensive rules on how the comparison will be made.

Privatization in any form would preclude the use of AF officers as faculty. These military faculties have been important in bringing forefront defense technology and problems to AFIT for study. Duty on the AFIT faculty has also contributed to the officer faculty's own professional development and growth.

Under privatization, the Air Force would not outsource the AFIT IDE program, so Air Force officers would lose the opportunity to earn an AFIT technical graduate degree.

Privatization would deny the officers the benefit of the military climate and culture. It also limits or denies them the opportunity to work with the Air Force organizations that they would be assigned to post-degree completion.

## AFIT and Dayton

### Theme

- AFIT offers graduate military education that is focused to meet the Air Force's and DOD's unique technical, operational and acquisition challenges. It's predominantly military and experienced civilian faculty provide a direct connection to the Air Force mission that allows them to fully support Air Force and DOD operational needs. AFIT's location provides unique access to the Air Force's premier acquisition, research, intelligence and logistics centers. Combine all this with the local Dayton area universities and large commercial aerospace presence, AFIT provides technical military capability unequaled by any other government, public or private institution. AFIT is the best way to ensure a technically educated officer corps that is necessary to plan, development, manage, maintain, and operate the world's most technically advanced weapons systems on which our national security depends.

### Why AFIT Should Remain in Dayton

- As the center of Air Force research, Wright-Patterson is the best place to teach Air Force graduate engineering students. AFIT students are collocated with about 2,000 scientists and engineers [confirm number] of the Air Force Research Laboratory (AFRL), one of the largest concentration of scientists at a single location in the world. This gives AFIT students unparalleled access to some of the best scientific minds in the Defense Department and to the most extensive and up-to-date laboratories dealing with defense-related research.
- As the Headquarters of Air Force Acquisition and Logistics Management, Wright-Patterson is the logical place to provide technical acquisition and logistics education for Air Force officers. The students have immediate access to all the program offices, planning staffs and data libraries located at WPAFB. This also allows the headquarter staff easy access to the students, and more important, the experienced faculty to consult on the services' multi-billion dollar acquisition and logistics programs.
- In addition to being collocated with the Air Force Research Laboratory (AFRL), AFIT is collocated with AFIT's primary customers at Wright-Patterson. These customers include the Headquarters Air Force Materiel Command (HQ AFMC), Aeronautical Systems Center (ASC), and National Air and Space Intelligence Center (NASIC). This collocation helps insure instruction is tightly focused on the customer's needs and provides additional educational resources.
- The Wright-Patterson area has a low cost of living. For example, the Basic Housing Allowance for a Captain with dependents is \$1101 a month at

WPAFB, but it is more than twice that amount (\$2291 a month) in Monterrey. Relocation of AFIT to a higher cost area would increase the Defense Department's housing costs by millions of dollars. Additionally, it could cause students considerable financial strain for unreimbursed expenses and it would discourage enrollment from students who did not want the financial burden of attending school in a high-cost area.

- AFIT can offer coursework in classified technology. For example, AFIT was able to teach about stealth technology to Air Force officers who went on to develop and operate stealth aircraft. These courses were so secret that most AFIT faculty members were unaware of their content. That could only happen because the technology was being developed in the classified laboratories at WPAFB.
- Collocation of AFIT with other Air Force organizations at Wright-Patterson creates synergies and cost efficiencies that help those organizations. For example, the technical library of Wright Patterson has been merged with the AFIT collection. AFIT student research assists the scientists at the Air Force Research Laboratory. AFIT acquisition studies support the major weapon system program offices. AFIT operational science students have provided real time support to the combatant commanders and the support agencies located at WPAFB.
- Support from the Wright-Patterson community enhances the effectiveness of AFIT in meeting its mission. A substantial amount of base housing is available, daycare is available, and the Wright-Patterson hospitals are among the largest, best equipped, and best staffed in the Air Force. These factors alleviate students, especially those with families, from many of the distractions encountered elsewhere.
- Dayton area engineering schools assist AFIT. Through the Dayton Area Graduate Studies Institute (DAGSI), AFIT students can take courses at the University of Dayton and Wright State University. This increases course offerings for AFIT students and helps cut down on redundant course offerings.

### **Why AFIT Should Not be Privatized**

- The Air Force headquarters, laboratories and commands that will be hosting the students in their next assignment after graduation sponsor AFIT programs and student research. AFIT supports and encourages the student in focusing their course work and their research to prepare for those follow-on military assignments. In many cases the work with their future organizations and leverage the vast resources available at WPAFB and other DOD locations. This provides incredible military value to the Air Force and DoD since the student leaves with a focused military graduate education that in many cases, allows them to arrive with 19 months of relevant experience before they ever

start the job. This is impossible to achieve at a master's program in any civilian university. This is the whole reason for having graduate military institutions.

- AFIT provides a very rigorous graduate education experience that is unsurpassed by any civilian institute or by NPS. AFIT programs are longer than most and much more in depth and rigorous. The intense course work and thesis experience are critical in developing DoD leaders who can handle significant challenges in their future assignments. Programs of substantial rigor and quality often require additional investment compared to cheap, lower quality substitutes. As the previous studies indicated, none of the civilian universities could match the AFIT program without substantial investment and higher costs. Even NPS has to add an additional six months to many of their programs (24 months) to come close to the content and rigor of AFIT.
- Privatizing AFIT will not save money. A survey conducted in 1997 demonstrated that contracting out AFIT's military specific course requirements to private universities would cost about the same as performing the work at AFIT. A formal, independent study the following year concluded the cost and benefits of AFIT were more favorable than privatization. Both AFIT and NPS have done a thorough review of their programs to remove any duplication. AFIT has also carefully reviewed their programs and currently out sources those programs through AFIT/CI that are candidates for privatization. What have remained at AFIT are truly military unique programs of focused study and research.
- AFIT provides graduate programs that are specifically tailored to meet Air Force requirements. All programs are subjected to periodic program reviews by Air Force organizations that use AFIT and by senior Air Force leadership. Private universities would not tailor programs for the Air Force without considerable additional expense. A key example is the graduate cost estimating program that is the only such program in the United States and is the only source of degreed cost estimating professionals to the DoD.
- AFIT can develop and implement new courses quickly. This can be done within weeks or months. This responsiveness is critical in a military environment and would be lost if the work were privatized.
- AFIT student research is focused to fill specific Air Force needs which saves the Air Force money. In fiscal year 2004, AFIT students conducted research estimated by its customers to save the Air Force \$29.6 million. If Air Force graduate students went to private universities, they would conduct research on non-Air Force topics. Virtually all AFIT faculty research is in support of a

current AF requirement, adding significantly to the Air Force research and development effort.

- More than half of all AFIT faculty members are Air Force officers holding Ph.D. degrees. No other educational institution, private or civilian, can provide this unique, military-focused knowledge and experience base which enhances the education of Air Force officers.
- The Army could not privatize its graduate educational needs. Even though the Army closed its in-house graduate education operations, it ended up shifting many of its requirements to AFIT and the Naval Postgraduate School.

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## DoD BRAC Recommendation: Close Brooks City Base

### DAYTON REGION RECOMMENDATION: **BRAC Commission should Support Brooks Closure Recommendations.**

#### Highlights of Analysis

- Military Value for the DoD is enhanced with Joint Centers of Excellence
- Monetary savings are generated
- WPAFB multiple-mission synergy is amplified and is significant step toward DOD Transformation and Jointness
- Dayton Region Planning is in place to facilitate the relocation/realignment
  - Academia, Medical, and business institutions are poised to welcome Brooks personnel and missions.

#### Synopsis of BRAC 2005 Recommendations

- Relocate the United States Air Force School of Aerospace Medicine, the Air Force Institute of Operational Health, the Naval Health Research Center Electro-Magnetic Energy Detachment, the Human Systems Development and Acquisition function, and the Human Effectiveness Directorate of the Air Force Research Laboratory to Wright Patterson Air Force Base, OH.
- Create a Joint Center of Excellence for Aerospace Medicine research at Wright-Patterson AFB, OH.
- Consolidate the Human Effectiveness Directorate with the Air Force Research Laboratory, Human Effectiveness Directorate at Wright Patterson Air Force Base, OH.

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- Realign Holloman AFB by disestablishing the high-onset gravitational force centrifuge and relocating the physiological training unit (49 ADOS/SGGT) to Wright-Patterson AFB.
- Disestablish any remaining organizations.

Two BRAC Cross Service Groups (Medical and Technical) believe their recommendations will:

- Enable technical synergy, and position the Department of the Air Force to exploit a center-of-mass of scientific, technical, and acquisition expertise required by the 20-year Force Structure Plan
- Achieve greater synergy across technical capabilities and functions by consolidating geographically separate units of the Air Force Research Laboratory.
- Realign and consolidate portions of the Air Force Research Laboratory to provide greater synergy across technical disciplines and functions.
- Total estimated one-time cost to the Department of Defense to implement this recommendation is \$325.3M. The net of all costs and savings to the Department during the implementation period is a cost of \$45.9M. The annual recurring savings to the Department after implementation is \$102.1M, with a payback expected in 2 years. The net present value of the costs and savings to the Department over 20 years is a savings of \$940.7M.
- Establish an Aeromedical Center of Excellence that provides a wholly unique research foundation for present and future military and civilian aviation.

## **Rationale**

### **Why we support these recommendations:**

These recommendations enable technical synergy, and position the Department of the Air Force to exploit a center-of-mass of scientific, technical, and acquisition expertise required by the 20-year Force Structure Plan. Greater synergy across

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technical capabilities and functions will be achieved by consolidating geographically separate units of the Air Force Research Laboratory. This recommendation realigns and consolidates portions of the Air Force Research Laboratory to provide greater synergy across technical disciplines and functions.

The end state will co-locate the Human Systems Development & Acquisition function and the Human Systems Research function with Air Force Aerospace Medicine and Occupational Health education and training. This action will co-locate the Development & Acquisition for Human Systems with the Research function and will concentrate acquisition expertise for Human Systems at one site. Additionally, the relocation of the physiological training unit from Holloman AFB with the relocation of the high-onset gravitational-force centrifuge, enables the continued use of a critical piece of equipment required for both Human Systems Research and Aerospace Medicine Education and Training. This end state will also increase synergy with the Air Platform Research and Development & Acquisition functions and continue the efficient use of equipment and facilities implemented under Biomedical Reliance and BRAC 91 at Wright Patterson AFB, OH. Realignment of Aerospace medical and non-medical RD&A to Wright Patterson AFB makes this location most suitable for a Joint Center for Aerospace Medical Research since it builds joint economies and optimizes use of limited pools of critical professional personnel with expertise in unique mission areas.

## **How do we plan to support and facilitate implementation of these recommendations?**

The Dayton Development coalition is leveraging state, regional, and local business, medical and academic communities, and government leadership and developed an out-reach plan to facilitate, coordinate, collaborate, and provide support to Air Force colleagues in gaining organizations as well as those in impacted organizations on Brooks City Base.

Our *pro-active outreach plan* is designed to:

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- Reduce disruptions in ongoing research prior to and during the transition
- Encourage researcher willingness to relocate.
- Support and extend intellectual synergy between newly arriving researchers and the academic, medical, and business communities.
- Identify opportunities for collaborative research, teaching opportunities, and promotion of technical transition and commercialization of research products.
- Integrate Ohio Bioscience infrastructure, which is superbly capable and nationally recognized as supportive of present and future aeromedical research.
- Identify appropriate local facilities and infrastructure that can support continuity of work while on-base facilities are made-ready.
- Work with State agencies and appropriate professional organizations to expedite required certifications, credentials, and accreditation, for personnel and facilities.
- Identify sponsor organizations that can link-with and develop supportive relationships with like-minded professional staff.
- Seek ways to motivate movement by professional and supporting staff (and their families) from San Antonio to Dayton.
- Mirror the AF sponsor program by identifying peer investigators that can serve as facilitators and collaborators and like-minded professionals in the Dayton region that can support the arriving professions.
- Investigate employment opportunities for spouses.
- Provide quality of life information regarding the Dayton community.

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## **How will we implement our plan?**

- To help ensure research programs continue with minimal interruption to meet operational AF requirements and critical training of aerospace medical personnel, we will:
  - Develop descriptive inventories of ongoing/planned programs and associated investigator, facility, accreditation, and infrastructure requirements.
  - Identify appropriate local facilities and infrastructure that can support continuity of work while on-base facilities are made-ready.
  - Work with State agencies and appropriate professional organizations to expedite required certifications, credentials, and accreditation, for personnel and facilities.
  - Identify sponsor organizations that can link-with and develop supportive relationships with like-minded professional staff.
  - Identify peer investigators that can serve as facilitators and collaborators to work with Brooks City Base (BCB) personnel.
  
- To motivate movement by professional and supporting staff (and their families) from San Antonio to Dayton, we will:
  - Develop welcome letters, sponsor programs, and outreach packages for each relevant individual that provides information on:
    - Potential opportunities for collaborative work in academic, medical and research communities.
    - Ongoing programs in academic, medical, and research communities that showcase the richness of community resources available and supportive.
    - Possible employment opportunities.
    - Quality of life, (e.g. health and medical resources, schools, housing, cost-of-living, day care, cultural, and creative facilities, and similar community attributes important to spouses and families.

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- To engage State and local government, academic, medical, and business community leadership to facilitate and support transition of mission, functions, and personnel, we will:
  - Collect inventory of available facilities, ongoing research programs, and principal investigators that related to ongoing and sustaining work in names BCB organizations.
  - Fast track required credentialing and accreditation requirements for research scientists, laboratory technicians, and teaching personnel including civilian physicians and other medical specialties from the School of Aerospace Medicine leadership and staff.
  - Identify opportunities for collaborative work using local facilities and/or resources.
  
- To coordinate, collaborate and provide support to gaining organizations at WPAFB, we will:
  - Initiate and maintain dialog with relevant AF, Navy, and Army organizational representatives at both Brooks City Base (BCB), and WPAFB, we will:
    - Collect programmatic information:
      - Specific research programs expected to continue post transition.
      - Research design and methodology (experimental design, subjects, treatments, data collection and analysis protocols, academic and commercial collaborators, and similar descriptive data, especially including accredited and certified laboratory equipment and facilities.
      - Identify capabilities in the Dayton region appropriate to sustain that work while AF facilities stand-up.
    - Develop and document a detailed inventory of facility requirements and create a matrix of local capabilities, and identify matches and gaps.

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- To support the Director, AFRL/Human Effectiveness Directorate and organizational leadership and planning staff at WPAFB and BCB, we will:
  - Initiate dialog regarding senior leadership plans and potential linkages with coalition initiatives to support move of his BCB organizations to WPAFB.
  - Detail programmatic, planning, personnel, facility descriptions, and bed-down information to better focus our support.
  - Build descriptive matrix of current and planned programs and required infrastructure.
  - Coordinate with coalition partners; identify available research facilities, opportunities for collaborative activities in the medical, research, and academic communities to link with that programmatic matrix.
  
- To support the Commanders, USAFSAM and AFIOH, we will:
  - Initiate dialog and gain support regarding potential linkages with coalition initiatives to support the move of USAFSAM and AFIOH.
  - Detail programs, faculty and credentials, description of infrastructure and facility identifies for movement, and similar information to better focus our support.
  - Build a descriptive matrix of requirements and required infrastructure.
  - Coordinate with coalition partners; identify available research facilities, opportunities for collaborative activities in the medical, research, and academic communities to link with the requirement matrix.
  - Work with coalition leadership regarding support and commitment to expedite facility and personnel accreditation and licensing requirements as required.
  
- To support all identified BCB organizations and gaining organizations at Wright-Patterson AFB and their staffs to encourage and motivate their personnel and enhance confidence in successful transition and stand-up at their new location, we will:

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- With coalition partners and AF leadership and staff at BCB and WPAFB, identify available research facilities, support requirements and opportunities for collaborative activities in the medical, research, and academic communities to link with the programmatic and requirement matrixes to develop a time-phased execution plan to support AF initiated movement of identified functions and organizations.
- Detail actions, identify participants, roles, activities, timelines, and desired outcomes, costs, etc.; secure agreements.
- Identify voluntary sponsors and build sponsorship packages and initiate personal contact with BCB personnel and their families.
- Maintain continuous interaction and frequent “heading-checks” with appropriate AF, State, City, and Coalition leadership to ensure buy-in, advocacy, and flexibility to adapt plans as the situation evolves.

## **Additional rationale supporting Medical and Technical JCSG recommendations**

### **Military Value Analysis Support**

The history of Aeromedical Research has deep roots at Wright-Patterson. (In 1934, Malcolm C. Grow, Surgeon General of the US Army Air Force, selected a young flight surgeon Harry G. Armstrong, to create the Aero Medical Laboratory at Wright Field, Dayton, Ohio. The concept was that high-altitude combat flight being made possible by engineering research at Wright Field required parallel research on the physiological problems of high altitude confronting the crew of such aircraft. Here we see the first recognition of the need for co-location of researcher and user. Over time, aeromedical research and training became focused at Brooks, while Wright-Patterson focused on human system technology development, transition, and integration linked to the warfighter. The natural synergy between these siblings continues as robust, positive, and productive. The plan to establish an Aeromedical Center of Excellence is recognition of that

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heritage and continues the view that Wright-Patterson AFB is the logical site unique integration and co-location of technology developers, medical researchers, warfighters, the business community, supporting agencies, and the acquisition community. The excellence of its practitioners is acknowledged worldwide and reflects the fact that much of the biomedical technology found in common use today has origin in these organizations. Placing critical elements of the medical RD&A community in the same location recognizes that while facilities are critical, it is the intellectual synergy of like-minded researchers that produces innovation. Ideas are often multidisciplinary in nature, and require cross-functional specialties and facilities to be actualized. The recommendations of the Medical and Technical JCSGs to move scientists from Books City Base along with other co-located and geographical assets will allow face-to-face communication between users, developers, and acquirers and help ensure that user requirements are understood. Co-locating cross-service researchers with the developer and acquirer also provides a significant degree of operational responsiveness to changing mission support needs and enhances ongoing opportunities for “Jointness” and mission supporting relationships with other services. Co-location can also result in more efficient utilization of manpower and personnel and reduce the potential for facility duplication. We are convinced that the merger of these assets with those already in place will reenergize the pace of aeromedical research and provide an essential foundation to support the security of our country for the next 50 years. (BRAC Selection Criteria 1 and 3; Volume X, Medical CJSJ Military Value Report, Volume XII, Technical JCSG, and supporting databases).

The superb research infrastructure and real property of Wright-Patterson and in the Dayton community provide substantial growth opportunity, a demonstrated capacity to support contingency and surge requirements, and highly experience and demonstrated mobilization and deployment capabilities. The base performs daily operational flying support of ongoing military operations, aeromedical evacuations, logistics and transportation, and deployment of base-medical, force protection, and support personnel. Combining facilities and personnel in one location reduces footprint and duplication of resources. Security and force protection are inherent assets at Wright-Patterson. The base also has extensive

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training and range facilities that provide simulation, training and exercising for force protection, security, medical emergency and disaster personnel for military, federal, NGO, and civilian first responders. The cost advantages of federal property over leased are significant (as reported in Volume X). (BRAC Selection Criteria 1, 2, 3 and 4. AF Link and Public Affairs releases).

Wright-Patterson AFB provides the infrastructure and expertise both inside and outside the “fence” to meet mission needs for at least the next 50 years. The extensive existing relationships with local/state medical and academic agencies includes world-class research facilities with extensive and secure area communications, and high-speed computational and information technologies... Examples include the Wright-State University School of Medicine and their extensive research programs, veterinary facilities, and the internationally known Division of Aerospace Medicine, offering an M.S. degree in aerospace medicine as well as residency training. This is the oldest civilian aerospace medicine training program for physicians in the United States with students from around the world. In addition the Wright State School of Medicine just received a \$28.5 million dollar donation from philanthropist Oscar Boonshoft to advance several strategic goals of the medical school: create state-of-the-art medical education facilities to train tomorrow's physicians; expand student scholarships; greatly accelerate the development of novel and self-sustaining research programs; and develop the infrastructure for innovative programs in global health and geriatric medicine. Other major participants include Proctor and Gamble research facilities, The Kettering Medical Center Network, Children’s Medical Center, the Cleveland Clinic, The Ohio State Medical Center, and a host of others (identified in the supplemental information that follows). It is highly likely that the proximity of Wright-State University, The Ohio State University, The University of Dayton, and the Kettering Medical Network will provide opportunities for joint teaching assignments. Infrastructure is also robust. Wright-Patterson is home to the Eagle supercomputer, the newest and most powerful supercomputer in the Department of Defense installed at the Aeronautical Systems Center Major Shared Resource Center at Wright-Patterson. This facility supports more than 1,000 researchers throughout the DOD in modeling and simulation, test and evaluation, biodynamics,

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medical investigations, and weapons system design. These immense computational resources provide unequaled investigative tools. This facility also includes Brocade Communications Systems' SilkWorm 4100 4 gigabits/sec midrange switches for creating a redundant storage network. One link will be to the Ohio Third Frontier Fiber Optic Network. This network, when complete, will be the most advanced statewide research network in the nation and will connect the community with nearly 100 Ohio medical schools, hospitals, federal research centers, and state and local governments. These infrastructure assets provide revolutionary ways for conducting research in fuel cell technology, cancer treatment, bioinformatics, optics, biotechnology, medical investigations, DNA mapping and a host of other applications. These resources evidence the regions rich technology base and can enhance the motivation and productivity of personnel. Superb research facilities are also attractive sites for re-locating research personnel. (BRAC Selection Criteria 1 and 4. AF Link; ODOD Report, Jan 05).

Re-location of personnel is a challenging situation. In recognition of the fact that we must work to encourage as many key personnel to move as possible, our approach is researcher-centric. As scientist and professionals, we understand the concerns voiced by the (then) Brooks AFB research community regarding similar prior BRAC (95) recommendations. Two primary issues were unwillingness to move by many researchers, and concern with expected disruption of ongoing research while the move was underway and facilities were being put in place. Much has changed in 10 years. Extensive growth has occurred in medical, commercial, and academic research activities and facilities. Brooks is now a "City Base" geographically isolated from the wider aeromedical research community, and while extraordinarily valuable and important work is being done, the opportunities for daily collaboration with colleagues, and sharing resources in other locations is more difficult. Today, ongoing and extensive collaborative research initiatives with the Wright-Patterson RD&A community augmented by state investments in infrastructure have resulted in an environment rich in exciting opportunities that were not in place in 1995 in the Dayton Community. Scientists and researchers are motivated by world-class facilities, opportunities to publish and

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accomplish meaningful work, the ability to investigate interesting phenomena, to work with highly talented colleagues, and to interact with those share their enthusiasm and curiosity. Equally critical are community schools, employment opportunities, health care facilities, and similar quality of life considerations that encourage families to support a move. These factors are part of the researcher-centric approach that our community presents to our potential new colleagues, and should, we hope, encourage and support a positive view towards moving to Dayton. To directly address these concerns, we have initiated an outreach to a broad base of our community asking them to identify facilities, research opportunities, collaborative and leadership activities in the medical, research, and academic community that they would make available to provide a motivating force to support eagerness to participate and minimize personal and professional anxiety regarding such a move. In an outreach letter to each person, we will provide letters of support, commitment, and opportunity from government, accreditation agencies, professional societies, academic, medical, and business community leaders. They will provide descriptions of support for and access to research facilities their ongoing investigations, supporting infrastructure, opportunities for joint academic research and collaborative investigation, processes in place for fast tracking of required licensing, certifications and accreditations, and other examples of state and local political and business community support. Spouses and other family members are not forgotten. We will include information on community resources (schools, housing, cost-of-living, medical facilities, shopping, etc.) as well addressing as possible employment opportunities for spouses. As part of this outreach, we proposed to mirror the sponsor program of the military that identify a person in the gaining organization to directly link with a newly assigned member to answer questions, provide local information, (etc.) for the member and family. In consultation with the gaining military organizations and working in coordination with their sponsor program, representatives of the Dayton region will offer to identify a professional cohort from the medical, academic or business community that can serve as a facilitator for both the inbound individual and their family. This approach has been taken to facilitate such a difficult situation and is a reflection of our understanding and regional commitment. Ohio has an extraordinarily broad bioscience infrastructure that provides a foundation of intellectual capital that can

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and will support the growth of aeromedical and human system research. Statements of support, identification of facilities, and opportunities cooperative research work from the academic, medical, and business communities reflects not only the outreach from the community, but illustrates the science and research foundation in place to support the rapid spin-up of critical military research both pre-and post move. (A prototypical outreach package is included as part of the supplemental materials that follow. BRAC Selection Criteria 1, 2 and 7. AF Link; ODOD Report, Jan 05).

A previously voiced concern (BRAC 95) regarding the move to Wright-Patterson is the potential impact on schedule and disruption of research during the shutdown at Brooks and start-up at Wright-Patterson. Concern is with the time necessary to configure the new location, including lab facilities, test equipment, suitable and appropriate subjects, and test articles/facilities. Issues of accreditation, safety, security, analysis and in-place and skilled technical support are also major concerns. While some of required infrastructure already exists at Wright-Patterson, and MCE is programmed to meet additional requirements, disruption of ongoing work cannot be totally ameliorated. As a partial solution, the Dayton Community offers an innovative approach that may serve to shorten the time latency between shutdown, the transition period of partial operation, and fully "open-for-business". In coordination with appropriate military agencies we will selectively make our local and regional research facilities available for use by Brooks aeromedical personnel. We will start the process of identifying potential linkages even before the target move date. (It is our belief that if the BRAC recommendation is finally approved, effected personnel will want to begin the transition as quickly as possible). Toward this end, this early definition of requirements and accomplishment of necessary documentation will allow meaningful work to continue (perhaps with TDY visits), much more rapidly than otherwise possible, and help lessen the scientific and personal concern with breaks in protocols. We believe this approach can help shorten the downtime for at least some portion of the ongoing work. Critically important, this innovative forward leaning can initiate and accelerate the essential intellectual synergy between the human systems aeromedical research community from Brooks and their colleagues

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at Wright-Patterson and in the Dayton Region. In addition to reducing interference with ongoing research schedules, these collegial on-site working relationships can be expected to provide unexpected outcomes, opportunities for future work, insight into new and innovative approaches, and build/cement the essential linkages between the academic, medical, and business communities with our newly arriving colleagues.

## **What Has Been Accomplished To Date?**

A critical step was taken with the construction and distribution of an extensive capability and facility survey sent to eight primary collation members.<sup>1</sup> The purpose of this effort was to develop an inventory of programs, capabilities, and facilities that might be made available to support and facilitate the movement of BRAC identified BCB medical and Human Effectiveness programs and personnel to Wright-Patterson AFB. Our goal, (as described in our approach above), was to identify opportunities for reducing BCB program disruption during the stressful and time consuming transition period between shut-down at Brooks and stand-up at Wright-Patterson. Additionally, to identify opportunities for collaboration, and providing opportunities for research, program sponsorship, and collegial interactions between our academic, medical, and business communities and the professional, technical, and family members of BCB personnel. While this extensive survey is still being completed, initial results from the first three responding agencies makes clear that there are many programmatic linkages between our coalition partners and program and facilities at BCB<sup>2</sup>. Certainly, expected differences exist between military technology applications and civilian programs, the data already collected show that at the science and research levels, the similarity of programs (Appendix VI) and the facilities at BCB and available from coalition members (Appendix IV) are remarkably complementary.

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<sup>1</sup> Wright State University School of Medicine, The Cleveland Clinic Foundation, Premier Health Partners, Kettering Medical Network, The Ohio State University, Children's Medical Center, the University of Dayton, University of Cincinnati Hospital System

<sup>2</sup> Appendix IV- Similar, Supportive, and Complementary Facilities; Appendix V- Additive Expertise and Experience; Appendix 6- Survey Results- Related, Similar, Supportive and Complementary Programs

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When compared with programs identified to move to Wright-Patterson, one or more of the 3 reporting (to date) coalition members identified highly or moderately similar relevance to their programs in the majority of cases. For AFRL/HED programs 26 of 36; Navy programs, 1 of 3; AFIOH, 10 of 10, and for the Human System Group 1 of 3. For USAFSAM, the correspondence with the Aerospace Residency Program at the Wright State University School of Medicine, was also high. A review of the depth and breath of expertise available from the coalition members (Appendix V), illustrates the extraordinarily deep and diverse reservoir level of adjunct expertise that is available to support the research community from BCB. These additional resources can add substantial scientific insight and potential payoff. appropriate facilities, (including appropriate animal colonies), both accredited and available to provide support, along with certified and accredited staff were also identified, and once again demonstrated that in the majority of cases, ongoing work at BCB could be continued using these facilities during the transition period and before military facilities became available. It also is worth investigating the opportunities to continue to use these facilities beyond the transition period.

As previously discussed, focusing only on the technical and professional personnel from BCB and their facility requirements is a necessary but not sufficient approach. We recognize that the families and relevant others associated with BCB personnel subject to relocation are critical elements too. The coalition also understands that the differences between military and civilian staff, and demographics within and between both groups requires flexible and creative approach focused on motivating and encouraging staff movement to WPAFB. Responses to the survey, and face-to-face meetings with relevant senior AFRL leadership has reinforced the correctness of our approach, including the potential for sponsorship in coordination with the military sponsor program, attention to providing focused outreach packages to appropriate BCB personnel, and recognition of the differing needs of staff. Younger professionals are likely to have different needs and options than those closer to retirement. Consequently, support from coalition partners to assist in employment opportunities for qualified family members, housing, educational, and similar information will be different in

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some aspects. The coalition is also planning to assist in recruitment. We well understand the not all the BCB staff will move with their functions. Consequently, staff vacancies will likely exists, and coalition members are ready to help the government identify qualified personnel that might either join the civilian work force, or provide support through one or more contracted support instruments. The survey makes clear that the wealth of talent that exists in the academic and medical communities in close proximity to WPAFB can also provide staff augmentation and perhaps critical additional skills that might otherwise not be available.

The coalition is well aware that there are existing links between South Texas academic institutions and contractor that provide both in-house and contract support to BSB organizations. The Dayton region is certainly well equipped to provide that level of support, and more, including the Dayton Area Graduate Medical Education Consortium<sup>3</sup>, <http://www.dagmec.org>, the University of Dayton Research Institute<sup>4</sup> [http://www.udri.udayton.edu/About\\_UDRI](http://www.udri.udayton.edu/About_UDRI), and the Dayton Area Graduate Studies Institute<sup>5</sup>, <http://www.dagsi.org/> just to name three of the more notable local academic consortia available to support the missions and functions of the BCB organizations identified to move to WPAFB.

As an integrated and focused approach to providing a beneficial partnership supporting our Air Force colleagues, the Dayton Development Coalition continues its long term commitment to ensuring that all community assets are prepared to offer enthusiastic support to help smooth the transition of BCB functions to our region. We will continue to work formal and informal information exchanges with senior military personnel to ensure that our initiatives are seen as helpful and that our partnership outreach activities with prospective gaining organizations on

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<sup>3</sup> DAGMEC is organized exclusively for educational and scientific purposes in support of allopathic and osteopathic medical and health related professional education. It provides a sophisticated/quantifiable, system-wide coordination of graduate medical education (GME) in Dayton.

<sup>4</sup> The University of Dayton Research Institute is the research arm of the University of Dayton, located in Dayton, Ohio. UDRI is a national leader in scientific and engineering research, serving government, industry, and not-for-profit customers. Our full-time professional staff of engineers and scientists conduct research and provide support in a wide variety of technical areas

<sup>5</sup> DAGSI is a consortium of graduate engineering schools at the University of Dayton , a private institution; Wright State University , a state-assisted institution; and the Air Force Institute of Technology, a federal institution. DAGSI integrates and leverages the combined resources of the partnership, including faculty, facilities, equipment, and other assets of the institutions. The DAGSI partnership, which includes The Ohio State University and the University of Cincinnati as affiliate members and Miami University as an associate member, effectively expands regional educational and research opportunities at the masters and doctoral levels of engineering and computer science

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**Wright-Patterson AFB are appropriate and correctly focused. These ongoing interactions, and the initial survey data, (to be augmented as remaining surveys are returned), have already proven more than sufficient to justify our confidence that our approach is correctly focused, and will flexibly adapt over time as Air Force requirements evolve and become more definitive and that our support will be a positive adjunct to AF plans to execute BRAC recommendations once they are finalized.**

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## **APPENDIX I**

### **Previously Expressed Concerns (Extracted from 1995 BRAC Commission Findings and Recommendations<sup>6</sup>)**

**1. Commission Findings:** Move would "...interrupt critical ongoing research".  
**Dayton Coalition Remedy.** In coordination with appropriate military agencies we will selectively make our local and regional research facilities available for use by Brooks aeromedical personnel; identify facilities, research opportunities, collaborative and leadership activities in the medical, research, and academic community. (Details provided in preceding text).

**2. Commission Findings:** "...delays associated with re-accreditation of equipment and laboratories...would be unacceptable"  
**Dayton Coalition Remedy:** Provide letters of support and commitment from government, accreditation and licensing agencies/authorities, professional societies, academic, medical, and business community leaders to accelerate the process by which facilities and personnel can receive required credential and certifications. (Details provided in preceding text).

**3. Commission Findings:** "...move would also create ...unacceptable events...large numbers of people would move, keeping costs high..."  
**Dayton Coalition Remedy:** Actual cost of personnel moves is a complicated calculus, influenced by many factors, including decisions by the gaining civilian personnel office regarding whether this is a transfer of function, or change in job location, (and other considerations), the grade of the person being moved, pay differentials between San Antonio and Dayton, and decisions regarding relocation support by the gaining organizations.

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<sup>6</sup> Pages 1-107-1-108

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**4. Commission Findings:** "...move would also create ...unacceptable events...or large

numbers of people would not move, interrupting vital research."

**Dayton Coalition Remedy:** See 1, 2, 3, and 5).

**5. Commission Findings:** "...more than half the professional staff said...probably not move."

**Dayton Coalition Remedy:** (See also "Dayton Coalition Remedy in 1, 3 and 4 above). We will provide a motivating, research-centric environment, to include factors focusing on professional opportunities in collaboration with the medical, business, and academic communities; ensure family focused issues are part of the out-reach (housing, community schools, employment opportunities, health care facilities, and similar quality of life considerations that encourage families to support a move; provide DDC consortium sponsorship and personalized communications. . (Details provided in preceding text).

**6. Commission Findings:** "...the primary receiving location, the excess is mainly office space and is not currently suited to accommodate Brooks' research activities. The Air Force projects it would have to construct or renovate nearly 1 million square feet to be able to take on the Brooks mission. Brooks currently operates in "world-class" facilities."

**Dayton Coalition Remedy** The extraordinarily advanced bio-medical and academic infrastructure of the technological, medical, communities and the 3<sup>rd</sup> Frontier investment made by the state has progressed from 10 years ago to a capability that is easily on par, if not superior. (See also issues related to collaborative use of DDC and Ohio consortium facilities).

**7. Commission Findings:** "...costs and disruption to the research...unacceptable."

**Dayton Coalition Remedy:** As previously addressed above.

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## **APPENDIX II**

### **Recent Concerns Voiced During Commission Hearings and in communication with BRAC Staff**

Concern- Why move AFRL/HED? (The Biosciences and Protection Division of AFRL/HE)

The Biosciences and Protection Division of AFRL/HE works on two primary technology thrusts focused on directed energy (lasers and high power microwaves) - protection from it- and using it for military purposes. Protection for our personnel, and our systems, and using it in ways that will provide military advantage. All services and multiple government agencies are users, and provide funding for this technology. AFRL/HED is one of a number of agencies working on these technologies.

HED is part of a tri-service laboratory complex that was formed as a result of ASBREM and BRAC-stimulated initiatives. The work was parsed among the three services to avoid duplication of effort. The Army is a critical partner. The Army is responsible for the analysis of the medical effects of DE weapons as well as medical treatment research. Moving this capability to Fort Sam will seriously disrupt the synergy with HED. It is believed that this tri-service capability is now the only remaining tri-service laboratory resulting from the initiatives of the earlier BRAC and ASBREM, (Armed Service Biomedical Research Evaluation and Management Committee). HED is also the joint center for research on non-lethal weapons effects. Most of this work is sponsored by the Joint Non-lethal Weapons Program Office, which is managed by the US Marines.

The excellent work done in this AFRL/HE Division is a small, but essential element of the many other programs that are involved in the applications of directed energy. Their work however, requires extensive, complicated, and

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additional technology development and maturation/testing by other AFRL Directorates in coordination with and supported by other services and agencies located at WPAFB and elsewhere. This extensive science and technology coordination, prioritization, and integration are primarily managed at WPAFB, and involve on-site representation from other services and government agencies. None of the other agencies whose participation is necessary for the further technology development, productizing, or funding are at Brooks City Base. The development and procurement of systems using these technologies is primarily the responsibility of AFMC and the multiple subordinate agencies at WPAFB. Other organizations that benefit from the HED technologies are the Materials Directorate (laser protection), the Directed Energy Directorate (high-power microwave weapons and other classified technologies), the Airborne Laser System Program, and Space Command (phased, pulsed radar effects).

The research facilities at Brooks City Base are unique, due to the nature of the work and the evolution of the research stream; however, they can be moved/duplicated (and could, no doubt profit from upgrading). However, the issue of security at the facility and associated support requirements are a significant consideration. AFRL/HED facilities and animal colonies require unique security measures. When Brooks AFB became Brooks City Base, installation of improved fences and other electronic monitoring equipment were required to protect the facilities as well as access to the animal vivarium and its open animal grazing area since it resided in virtually unprotected and open land patrolled by civilian police. While the facilities have been upgraded within the past few years, further enhancements are required and a two-stage MILCON program has been planned to further expand the facilities, especially the animal care facilities. Security, access, and collocation with their joint service colleagues are clearly superior in every respect at WPAFB.

What about the animals? Animals are used as test subjects to support some programs. Much of the primate colony used by AFRL/HED has been moved off Brooks City Base, and leased back as needed. The animal facilities are supported by contracted personnel and managed by Army veterinarians who also provide

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pathology support for the experimental efforts with the animals. Sources to provide similar support from fully accredited and secure facilities less than a mile from WPAFB have already been identified. (Further analysis might result in options for the AF that may obviate the need to modify the existing facility on WPAFB).

## **APPENDIX III**

### **Responses to statements made during the 11 Jul BRAC Commissioners hearings at San Antonio Texas.<sup>7</sup>**

**Assertion:** The majority of the training of the School of Aerospace Medicine has nothing whatsoever to do with human systems research and development. For example, there are four separate courses in aeromedical evacuation....” (p97)

**Response:** *The aeromedical evacuation example is precisely why joining USAFSAM with the research and acquisition community is so logical.* Using this example- the design of the aeromedical evacuation equipment itself, both for ground use and development of the special aircraft configurations for carrying stretchers, providing casualty support while in transit, and development of new technologies to sustain and support our wounded is very much a human systems integration issue that is the responsibility of the research and acquisition communities and requires the input and experience of the flight nurses, medics, physicians, and technicians that use that equipment. The training itself can be accomplished in many locations, but it is the logical linkage between the users, and the research, development, and acquisition communities that leads to advances in technology and capabilities to aid our wounded. It was this synergy between and among these communities that led to the recommendations of the Medical Joint Cross Service Working Group further supported by their recommendation that, the HSW System Program Office, a major acquisition player in support of aeromedical evacuation equipment, also move to WPAFB.

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<sup>7</sup> Extracted from the “Uncertified” testimony available on the BRAC Web site.

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(The organizations that specify, build, test, integrate and field these equipments are at Wright-Patterson. In fact Human systems is much more inclusive then medical evacuation issues, in point of fact, Human Systems Integration (HSI) optimizes the human part of the total system equation by integrating human factors engineering (HFE); manpower, personnel, training (MPT); health hazards; safety factors; **medical factors**; personnel (or human) survivability factors; and habitability considerations into the system acquisition process. While all of the HSI elements could be applicable to most systems, the last three - medical factors, personnel survivability factors, and habitability - are applicable primarily to military systems, and are described in military terms)

**Assertion:** Aeromedical consult service links with Wilford Hall. “This vital partnership...will not exist at Wright-Patterson”. (p.98)

**Response:** That assertion should be tempered by the fact that there is every reason to believe that similar relationships can be built with Wright-Patterson Medical Center or at any one of the medical centers or medical schools in the region, including the Aerospace Medical Program at Wright-State, Cincinnati Medical System, Ohio State Medical Center, and others. Additionally, the point is made that since Wilford Hall will no longer be available for that “...vital partnership...” the move to Ft Sam will serve as well. Aircrew members that travel to USAFSAM for evaluations and assessment can just as easily travel to the WPAFB region.

**Assertion:** Leave USAFSAM where it is- for perhaps the 6 year period post formal decision, and perhaps after. (p.98)

**Response:** Looking at only parts of the BRAC recommendations is a sub-optimization of the stated intent of the Medical JCSWG which focused on developing an AF level solution that maximizes the integration of dependent and currently geographically separated assets, conserves resources, and postures our remaining assets with flexibility to meet future requirements. An unstated, but embedded assumption in this argument, is that the role of USAFSAM will remain unchanged and that their ability to evolve to meet changing requirements can be best achieved by remaining as an isolated element on an otherwise closed facility.

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Flexibility is the essential asset for organization growth and responsiveness.  
Maintaining the status quo has not been a path for success.

**Assertion:** Much of the USAFSAM faculty, military and civilian will not move.  
(P.98)

**Response:** This assertion was made based on an unofficial and ad-hoc survey made during the 1995 BRAC in response to the then recommendations to close Brooks AFB. Much has transpired at both Brooks and Wright Patterson in the past 10 years, including facilities, demographics, organizations, and operations. Extensive past experience has demonstrated that predictions of who might or might not move with an organizational geographic change are often off the mark. Regardless of surveys, most will not actually make a decision regarding a move until they are forced to do so. This is especially true in organizations that have a comparatively small number of civilians. The military will move, or retire and the civilians with retirement options may choose that course. Personnel turnover is a fact of life in any organization, and the size or implications can only be guesses. However, we do agree that some number of the professional staff may choose to retire or seek other employment. Before making that decision, most will want to know what the new community and organization can offer in terms of professional growth, research and perhaps teaching opportunities, linkages with professional colleagues, and community resources and support for themselves and their families. This includes educational and employment opportunities for their spouses and family members, as well as all other aspects of community infrastructure. The Dayton Development Coalition is very sensitive to these concerns, and, along with our AF colleagues, is developing an outreach plan that will mirror the sponsor program of the military that identifies a person in a gaining organization to directly link with a newly assigned member to answer questions, provide local information, (etc.) for the member and family. In consultation with the gaining military organizations and working in coordination with their sponsor program, representatives of the Dayton region plan on offering a professional cohort from the medical, academic or business community that can serve as a facilitator for both the inbound individual and their family. This approach is expected to facilitate such a difficult situation and is a reflection of our

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understanding of the stress caused by organizational movement as well as evidence of our regional commitment to help re-establish USAFSAM at Wright-Patterson AFB.

**Assertion:** Those that teach critical care in the air are on loan from Wilford Hall...they are worldwide experienced....and not at WPAFB. (p99)

**Response:** Having access to experienced personnel, as trainers is clearly a valid issue. However, the assumption is that there are no such experienced personnel in the WPAFB region was not supported by data so must be considered as opinion, not fact. More importantly, the use of computer and telepresence training, including virtual simulation can make the expertise at any geographic area available worldwide. In fact, with the rapid advances in web and wireless technology, virtual training in critical care, as well as in medical decision-making is easily achievable. A large number of teaching hospitals and medical schools are using these tools daily, not only for initial training, but also for continuation and upgrade training. It is clear that these tools will play an even larger role in training our AF personnel (medical and otherwise) in the future. An additional consideration, is that using these technologies will allow access to in-theater personnel who can provide up-to-the-minute lessons-learned, best-practices, and similar information that are invaluable adjuncts to student education, and do not require an instructor in South Texas or a class held in Baghdad or Laundstul, GE.

**Assertion:** “BRAC 95 data showed that 70-80 percent of scientist will not move”. “. moving AFRL/HED will essentially” “...lose their function”. (p101).

**Response:** As discussed above, this untested nor validated assertion made in 95 is not relevant to the current situation. Neither Brooks City Base nor Wright-Patterson AFB or their respective surrounding communities are the same as they were 10 years ago. While is it obvious that some professional staff may not move, the Dayton Development Coalitions plans, as discussed above, are expected to be a source of encouragement, and help facilitate the transition and movement of the BCB impacted staff.

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## **APPENDIX IV**

### **Similar, Supportive, and Complementary Facilities**

#### **Wright-State University**

Biosafety Level 3 Facility, including:

- Modern molecular biology equipment
- Centrifuges (low, high, and micro speeds)
- PCR systems
- Spectrophotometer
- Electrophoresis equipment
- Gel documentation system
- DNA dryer
- Hybridization oven
- Gel dryer
- Fume hoods, digital balances, water purification systems and more

Sarin Facility (Chemical Surety Facility (XCSM)). One of only five non-DOD facilities in the country capable of using diluted chemical warfare agents

Virtual Reality Laboratory

**Certifications:** The Laboratory Animal Resources Program has full accreditation from the Association for Assessment and Accreditation of Laboratory Animal Care, International (AAALAC), last awarded in Mar 2004. Director is a Diplomat of the American College of Laboratory Animal Medicine. Staff is fully AALAS certified.

Laboratory Animal Facilities include:

- Surgery suites
- Radiology
- Pathology
- Full-service clinical laboratory services

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Tightly controlled animal housing  
4.6-acre pasture and kennels.

## Various Laser Laboratories

### Biochemistry and Molecular Biology, including:

Visible-ultraviolet recording spectrophotometers  
Spectrofluorometers  
DNA synthesizer  
Circular dichroism spectrophotometer  
FPLC  
Silicon Graphics Molecular modeling system  
DNA array real-time PCR systems  
Stopped-flow reaction analyzer  
Liquid scintillation counters  
Gamma counters  
Ultracentrifuges  
Various kinds of electrophoresis equipment  
Phosphor imager  
Gas-liquid chromatographs  
High-pressure liquid chromatographs  
Tissue culture facilities.

### Genomics Research Core Facilities, including:

Affymetrix GeneChip System, high-level digital gel image analysis, RT-PCR and flow cytometry capability, ABI 7900 HT SDS with PCR clean room, TaqMan based RT-PCR, Syber green based RT-PCR, SNP genotyping, Agilent Bioanalyzer 2100, RNA, DNA and protein quantification, BD FACScan for analysis of cells based according to measurable properties, and a Fuji LAS 3000.

### Proteomics Analysis Laboratory and Confocal Imaging Core Facility, including:

Agarose gel apparatus

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Power supplies  
Bacterial and shaking incubators  
Centrifuges  
PCR machine  
Agarose gel documentation system  
Ciphergen SELDI-TOF MS Protein Chip Array  
Fuji FLA-2000 Phosphorimager/Fluorimager  
Lecia TCS SP2 Confocal Microscope  
Packard Fusion Microplate Reader  
ABI 7500 Real Time PCR System  
Fotodyne Gel Documentation System

Nuclear Magnetic Resonance Laboratory, including:  
Bruker AM 360 NMR Spectrometer (8.5T) (with wide-bore magnet and  
home built probes for studies of small laboratory animals *in vivo*.  
Bruker BioSpec Spectrometer/Imager (2.35T)  
High-resolution Varian INOVA 600 MHz NMR Spectrometer

Center for Brain Research

Hyperbaric Research Center

Toxicology Studies

Cell Dynamics Research

Wallace-Kettering Neuroscience Institute

Hyperbaric Cell Biology Facility (including fluorescence microscopy equipment)

Engineering Psychology Laboratory

Psychoacoustics Laboratory

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Joint Cognitive Systems Laboratory

Laboratory in Motion

Applied Psychology Laboratory

Personnel Psychology Laboratory

Workplace Cognition

Motivation and Training Laboratory

Signal Detection Laboratory

Visual Science Laboratory

Display Design Laboratory

Virtual Environment Research, Interactive Technology and Simulation Facility  
(Located in AFRL/HE)

Spatial Orientation Laboratory

Institute for Environmental Quality

## **The Ohio State University**

There are some direct areas of synergy and some more general areas. The direct areas are:

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Hyperbaric oxygen program located in Emergency Medicine - involving the treatment of patients in the hyperbaric chamber

Programs in the Comprehensive Wound Center. The latter program encompasses both clinical and basic research components.

There is a facility under construction at Morehouse (Camera) to house the Wound Center. The extensive human imaging resources on this campus would be an asset to be listed - human 7T MRI, 8T MRI, 3T MRI and several lower field strength MRI.

Extensive PET and CT instrumentation is available as well. There are campus-wide biosafety level 3 facilities for research with select agents.

The more general areas of cooperativity are in the area of infrastructure. The opening of the Biomedical Research Tower in 2006 will open up 250,000 new square feet of biomedical research space for increased collaboration with military-focused research. Even more importantly, there will be state-of-the-art core facilities in:

- 1) high-throughput proteomics
- 2) high-throughput genomics including microarray
- 3) animal imaging involving magnetic resonance imaging and NMR
- 4) high capacity bioinformatics
- 5) analytical and high-speed flow cytometry sorting for cell analysis
- 6) x-ray crystallography
- 7) microscopy - electron, confocal and fluorescence

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8) cryogen storage

9) tissue engineering

10) transgenic and knockout mouse production facility

Additional relevant facilities include:

Laboratories in Biochemistry, Entomology, Microbiology, Molecular Genetics,  
Plant Cellular and Molecular Biology, and Plant Molecular Biology and  
Biotechnology programs

Plant and Microbial Genomics Facility

Biomedical Engineering laboratories

Physics and Chemistry laboratories

Biomedical Engineering laboratories

MicroMedical Laboratories

Terahertz laboratories

High Energy Laser laboratories (Secure facility under development)

ElectroScience Laboratory

Extensive equipment and facilities for testing lasers and RfR on materials.

## **Cleveland Clinic Foundation**

Biological Safety Level 3- Laboratory

BioMEMS laboratory

Cell Separation Laboratory

Prototype Workshop

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**Cancer Biology Laboratory**

**Neuropsychology**

**Neuroscience Center**

**Center for Space Medicine**

**General Clinical Research Center Long Term Bedrest facility**

**Zin technologies**

**Cole Eye Institute**

**Heart Center**

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## **APPENDIX V** **Additive Expertise and Experience**

**The Ohio State University:** Researchers at The Ohio State University (one of the top 10 public research Universities in the Country) have strong capabilities and interests in all of the areas listed. It is clear that these programs require the integration of capabilities in several of the colleges (Engineering, Medicine, Mathematical and Physical Sciences, Biological Sciences, Food Agricultural and Environmental Sciences, and Social and Behavioral Sciences) to ensure a true interdisciplinary effort. This integration is doable and welcomed by the researchers at OSU. In addition, work in the Ergonomics Institute in areas of spine and upper limb mechanics, fatigue and injury is clearly relevant. This research group is active in evaluating human/machine interface problems, as well as factors related to aggravation of injury and return to work/duty. The metabolic bone disease program has an interest in bone health and osteoporosis in relation to risk of injury, either in acute injury or repetitive loading problems. They are researching new training methods expected to improve bone strength. A past project looked at the risk of injury to women in paratrooper activity. OSU has a portable bone density lab that could be taken to a base for measurement and risk-assessment. The human biomechanics motion and gait laboratory is developing new methods for measuring human motion, including assessment of forces to predict injury risks. Portable devices are being developed that could be used in real-world settings outside the lab. Brain injury research activities including assessment and treatment following concussion. OSU also has expertise in management of these injuries in combination with alcohol or drug abuse. The OSU Spine Center will open in the fall and will include both basic science and clinical trials research capability for spine injury assessment and treatment. Current research involves understanding the response of the chondrocytes to exercise and repetitive activity. At OSU, the structural mechanisms are in place to begin to support BCB transition. (The

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responses provided (to the survey), in no way represent the only capabilities that apply to the requested problem application areas.<sup>8</sup>

## **1<sup>9</sup>- Bio-based Threat Identification, Detection and Monitoring Applications**

**OSU relevant expertise:** Development of sensors and detectors of nano-scale organisms through electrochemical, electromechanical measurements at the lowest levels of detection capable in the world today. We have both conventional MRI with “world-record” spatial resolution (just above one micron) that we are applying to biological samples. Ultra sensitive Force Detected MRI: Our MRFM work is aimed at bio molecular detection. In particular, a key goal of a new award is bio molecular imaging. This work is more forward-looking than a currently active capability, but very relevant to the listed topic. The Holy Grail target is biomolecular structure determination for bio-threat identification and analysis. Faculty, staff, and students are capable of developing the capability to identify and monitor biological materials. Laboratory facilities, equipment, research protocols, and techniques are transferable and could be applied towards this objective.

**CCF relevant experience:** Program personnel have expertise in magnetic cell separation, MEMS, microfluidics, magnetic modeling, and bioelectrical detection

**WSU relevant experience:** Sponsored PhD research programs

## **2- Forensic attribution of genetically modified biological agents.**

**OSU relevant expertise:** Faculty, staff, and students are capable of identifying the origin and biological warfare agents. Laboratory facilities, equipment, research protocols, and techniques are transferable and could be applied towards this objective.

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<sup>8</sup> Responses have been are paraphrased.

<sup>9</sup> Statement numbers 1- 33 are from the survey completed by coalition members in which they identified AFRL/HED programs that were similar to their ongoing efforts.

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**CCF relevant expertise:** Researchers use BSL-3 laboratory to study viral pathogenesis and evolution, with the long-term goal of developing antivirals.

**WSU relevant experience:** Consultation

### **3- Neutralization of genetically modified biological agents:**

**OSU relevant expertise:** Entomologists and microbiologists are experienced at neutralizing agents. Other units have individuals with some expertise in this area. Laboratory facilities, equipment, and techniques used on conventional organisms should be transferable to genetically modified organisms.

**CCF relevant expertise:** Virology studies of the pathogenesis of viruses; researchers in cancer biology are studying the anti-viral mechanisms of interferon.

### **4- Neutralization effectiveness assessment.**

**OSU relevant expertise:** Expertise exists throughout the college, Entomologists, and microbiologists are experienced at neutralizing agents. Other units have individuals with some expertise in this area. Laboratory facilities, equipment, and techniques used on conventional organisms should be transferable to genetically modified organisms.

**CCF relevant expertise:** Program personnel have expertise in magnetic cell identification, microfluidics, MEMS, magnetic modeling, and bioelectrical detection.

### **5- Next-generation biological threat neutralization.**

**OSU relevant expertise:** The College and its subunits have great strength in systematic biology. This field includes identification of unknown Taxa using a variety of tools and techniques. Laboratory facilities, equipment, and techniques used on conventional organisms should be transferable to genetically modified organisms.

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**CCF relevant expertise:** Development of in-situ sensors to identify new biological agents as well as pursuing anti-virals for those appropriate biological agents.

## **6- Biological threat neutralization.**

**OSU relevant expertise:** Entomologists and microbiologists are experienced at neutralizing agents. Other units have individuals with some expertise in this area. Researchers and experienced with strategies and tactics to control infectious and pestiferous species with minimal human or environmental impact. Many of these approaches could be applied toward this objective. Laboratories, equipment, and techniques used on conventional organisms should be transferable to genetically modified organisms.

**WSU relevant experience:** Collaborative research projects.

## **8- Bio-based Adversarial Cognitive Disruption.**

**WSU relevant experience:** Human Factors Doctoral program

## **10- Behavioral Performance Modeling for Individuals and Teams.**

## **12- Individualized Biobehavioral Performance Enhancement.**

## **26- Target Effects (Laser).**

## **35- Bioassessment for Radio Frequency Weaponry.**

**(8, 10, 12, 26, 35) OSU relevant expertise:** Information analysis and comprehension; sponsor National Security Agency -- Cognitive Systems Engineering for Innovation in Information Analysis and Comprehension: OSU Interdisciplinary Consortium; H98230-04-C-0502

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Advanced Decision Architectures; sponsor Army Research Laboratories  
Advanced decision architectures: Building information superiority in the Army  
through user-centered decision support; Micro Analysis & Design

**(8, 10, 12, 26, 35) CCF relevant expertise:** Expertise in measurement of  
cognitive function, functional brain imaging, and prototyping devices.

Fully functioning and experienced long-term bed rest facility

## **9-Biobehavioral Performance Enhancement**

**CCF relevant expertise:** Fully functioning and experienced long-term bed rest  
facility

### **More generally**

**WSU relevant experience:** Sponsored research and doctoral education

## **10- Biobehavioral Sensors**

**CCF relevant expertise:** Strong engineering and medical expertise

**WSU relevant experience:** Sponsored research and doctoral education

## **13. Optical Radiation Bioeffects**

**WSU relevant experience:** Collaborative research

## **14. Large-Spot Size Dependence- Infra-Red Laser**

## **15. Large-Spot Dependence- Ultra-Violet Laser**

## **16. Exposure Standards for Ultra-Violet Laser**

## **17. Exposure Standards for Infrared Laser**

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**(13-17) CCF relevant expertise:** Researchers at the Cole Eye Institute have extensive experience in measuring retinal damage. Partnering with a local institution such as NASA Glenn Research Center would give additional capabilities

## **19. Radio Frequency Radiation (RfR) Bioeffects**

**CCF relevant expertise:** Radiation oncologist and cellular biologist will be able to assess the tissue damage associated with exposures

## **20. Exposure Standards for microwaves**

**CCF relevant expertise:** Surgeons have extensive experience in the use of microwave technologies for surgical treatment of urological and heart conditions; they understand the impact of microwave energy on human tissues.

## **22. Exposure Standards of Terrahertz.**

**OSU relevant expertise:** Provide instrumentation and laboratory facilities to make accurate terrahertz measurements and images, and provide the expertise for modeling and interpretation. Also, develop portable equipment for other laboratories, and train personnel in the use of the equipment. Have provided THZ test and evaluation for other participants in DARPA programs, including the Jet Propulsion Laboratory and Raytheon.

**WSU relevant expertise:** Sponsored research.

## **25. Hypervision Laser Eye Protection (LEP).**

**OSU relevant expertise:** Development of sensors for chem/bio detection, development of optical protections based on diffractive optics for LEP.

**CCF relevant expertise:** Researchers at the Cole Eye Institute have extensive experience in measuring retinal damage. Partnering with a local institution such

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as NASA Glenn Research Center would give additional capabilities

## **27. Target-Effects - High-Energy Laser.**

**OSU relevant expertise:** The Ohio State University has one of the premier groups (including Professor Richard Freeman, Professor Linn Van Woerkom, and Professor Louis DiMauro) of researchers in the world in the area of high-energy laser research and applications. All have active research in a variety of defense related research that has direct applicability to programs listed in this questionnaire.

**CCF relevant expertise:** Cole Eye Institute personnel are able to evaluate damage caused to the eye by various laser weapons systems.

## **28. Laser target effects-Near Ultra-Violet**

## **29. Laser target effects-Visible Spectrum**

**CCF relevant expertise:** Cole Eye Institute personnel are able to evaluate damage caused to the eye by various laser weapons systems.

## **30. Target Effects - Full Spectrum/Combined RF and Laser.**

**CCF relevant expertise:** Cole Eye Institute personnel are able to evaluate eye damage.

## **31. RF Target Effects**

**OSU relevant expertise:** OSU has a strong interest and significant ongoing programs, including collaborations with organizations such as the Army Night Vision Laboratory, DTRA, and ARO.

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## **33. Scaleable Microwave Effects.**

**OSU relevant expertise:** Excellent capabilities, equipment, and facilities in the OSU ElectroScience Laboratory.

## **Naval Health Research Center Detachment- Directed Energy Bioeffects Laboratory Program**

### **Laser Glare Studies**

**CCF relevant expertise:** Cole Eye Institute researchers are capable of measuring and evaluation eye damage.

**WSU relevant experience:** Collaborative research

### **Laser Bioeffects Studies**

**CCF relevant expertise:** Evaluating, characterizing, and measuring eye damage

## **AF Institute for Operational Health**

### **1. Readiness Division**

**WSU relevant experience:** Collaborative research; Masters of Public Health Program

### **2. Risk Analysis Division**

**WSU relevant experience:** Research programs, consulting, environmental science, biomedical science doctoral programs.

### **3. Risk Assessment Division**

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**WSU relevant experience:** Risk studies, Masters of Public Health Program

## **4. Environmental Analysis Division**

**WSU relevant experience:** Environmental Sciences doctoral program

## **5. Health and Safety Division**

**WSU relevant experience:** Ergonomic and Human Factors studies

## **6. Surveillance Directorate**

**WSU relevant experience:** Aquatic Analysis

## **7. Epidemiological Surveillance Division**

**(2-7) CCF relevant expertise:** The clinical epidemiology group provides expertise on medical decision making, such as prediction model software development, decision analysis, cost-effectiveness analysis, and quality of life assessment.

**WSU relevant experience:** Center for Interventions, Treatment and Addictions Research

## **USAF School of Aerospace Medicine**

### **WSU Residency in Aerospace Medicine**

Wright State University's Aerospace Medicine Program is the oldest civilian aerospace medicine training program for physicians in the United States having graduated more than 100 physicians from around the world since its founding in 1978. The program consists of course work and research in the first two years, leading to an M.S. degree. A third year of experience or research under the

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direction of the program is then required to establish eligibility to take the board examination for certification by the American Board of Preventive Medicine, with the subspecialty in Aerospace Medicine. Program faculty and residents engage in a wide variety of research projects in the area of aerospace medicine.

The impact of the Aerospace Medicine Residency Program is worldwide. In addition to students from the United States, the program has attracted students from more than 20 foreign countries. Graduates hold responsible aerospace positions in all parts of the world. The chief of the medical division of the Japanese space agency and his staff are all graduates of our program. The medical directors of four airlines and the majority of the medical officers at NASA's Johnson and Kennedy Space Centers are alumni, and graduates have made major contributions within the Federal Aviation Administration.

Program faculty and students engage in a wide range of research in aerospace medicine and produce theses covering subjects like G-induced loss of consciousness (G-LOC), spatial disorientation, in-flight medical emergencies, and space flight-induced orthostatic intolerance. Residents also complete several clinical rotations, including one in flight medicine, ophthalmology, and ENT at Wright-Patterson Air Force Base; forensic medicine at the Montgomery County Coroner's Office; aircraft accident investigation with the National Transportation Safety Board and FAA Civil Aerospace Medical Institute; aerospace medicine and occupational health at Kennedy Space Center; and hyperbaric medicine at Brevard Regional Hyperbaric Center in Florida.

**Residency Program-** The Aerospace Medicine Residency Program in aerospace medicine is accredited by the Accreditation Council for Graduate Medical Education. The Wright State University program is part of the Department of Community Health and provides all of the academic year (PGY-2) and practicum year (PGY-3) residency training requirements for the American Board of Preventive Medicine. The clinical year (PGY-1) must be completed prior to entering our residency program (See below). Neither Fellowships nor combined programs with other residencies are offered.

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The medical and scientific personnel at Wright-Patterson Air Force Base are closely affiliated with Wright State University in the conduct of the program. Residents may use the base facilities to do research for their Master of Science in the Aerospace Medicine.

US Citizens Who Are Foreign Medical Graduates: Applicants who wish to apply please note that you are required to have ECFMG/USMLE certification in addition to completion of at least one ACGME approved PGY-1 year. Other international graduates may be considered for the Masters Program track only, due to our funding mechanisms.

The program is constituted as follows:

Clinical Year (PGY-1): A minimum of one ACGME accredited year in a recognized direct primary patient care specialty (Example: family practice, internal medicine, OB/GYN, transitional year). This must be completed *prior* to entering our residency program. Application to the Aerospace Medicine residency program may be made while in medical school or afterward.

Academic Year (PGY-2): This 12-month period provides graduate course work in epidemiology, biostatistics, health services administration and environmental health. A research topic in aerospace medicine is selected and is begun under supervision. Certain clinical aerospace medicine experiences are provided along with field trips to aviation related facilities. The academic year extends from July 1 through June 30.

The "Practicum Year" (PGY-3)-supervised experience and application: The second year consists of continued progress and completion of the research project undertaken in the first year. Residents must complete several one-month clinical aerospace medicine rotations at Wright-Patterson Air Force Base, the Federal Aviation Administration, American Airlines, forensic pathology, and otorhinolaryngology.

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**Master of Science:** The Master of Science degree is awarded to those trainees who complete the 46 hours of graduate course work and the thesis research project.

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## **APPENDIX VI** **Related, Similar, Supportive and Complementary Programs** ***See attached MS EXCEL<sup>®</sup> WORKBOOK***



Responses.xls

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**APPENDIX VII**  
**Survey Sent to Coalition Partners**

Available upon request

## **Consolidate Civilian Personnel Offices (CPOs) within each Military Department and the Defense Agencies**

### **BRAC Recommendation**

Realign Wright-Patterson Air Force Base, OH, by relocating the Civilian Personnel Office to Randolph Air Force Base, TX.

### **DAYTON REGION RECOMMENDATION**

The Civilian Personnel Offices at Wright-Patterson Air Force Base and the three Air Force Air Logistics Centers should *not* be realigned to Randolph AFB, TX. The realignment would compromise their ability to recruit, train and retain/manage the large, specialized, and critical civilian workforces at these locations, particularly when implementing the sharply different National Securing Personnel System (NSPS), in comparison to the potential savings mere consolidation of like functions can yield.

**BRAC Justification:** The consolidation of Civilian Personnel Offices within each Military Department and the transactional functions among the Defense Agencies reduces excess capacity, reduces the use of leased facilities, and achieves manpower savings through consolidation and elimination of duplicate functions. This recommendation supports the Administration's urging of federal agencies to consolidate personnel services. During the implementation of this recommendation it is important to partner with the National Security Personnel System (NSPS). NSPS provides the opportunity to improve the effectiveness of the Department through a simplified personnel management system that will improve the way it hires and assigns employees. This recommendation will be an effective tool for NSPS and provide the flexibility and responsiveness that supports the implementation of this system. Since NSPS will define a new human resource system featuring streamlined hiring, simplified job changes, and a less complex classification system, it covers all functions that would be supported by Civilian Personnel Offices.

**Payback:** The total estimated one-time cost to the Department of Defense to implement this recommendation is \$97.5M. The net of all costs and savings to the Department of Defense during the implementation period is a cost of \$46.4M. Annual recurring savings to the Department after implementation are \$24.4M with a payback expected in four years. The net present value of the costs and savings to the Department over 20 years is a savings of \$196.7M.

**Economic Impact on Communities:** Assuming no economic recovery, this recommendation could result in maximum potential job reductions (direct and indirect) over the 2006-2011 period in the respective economic areas as listed in the table below:

Source of Numbers	2006-2011 Period		
	Direct Job Reductions	Indirect Job Reductions	Total
BRAC Report	(127)	(108)	(235)
Local Validation	(127)	(108)	(235)

The aggregate economic impact of all recommended actions on these economic regions of influence was considered and is at Appendix B of Volume I.

**Community Infrastructure Assessment:** There are no known community infrastructure impediments to implementation of all recommendations affecting the installations in this recommendation.

**Environmental Impact:** Additional operations at Randolph may impact threatened and endangered species and/or critical habitats. The aggregate environmental impact of all recommended BRAC actions affecting the bases in this recommendation has been reviewed. There are no known environmental impediments to implementation of this recommendation.

## DAYTON REGION RECOMMENDATION

The Civilian Personnel Offices at Wright-Patterson Air Force Base and the three Air Force Air Logistics Centers should *not* be realigned to Randolph AFB, TX. The realignment would compromise their ability to recruit, train and retain/manage the large, specialized, and critical civilian workforces at these locations, particularly when implementing the sharply different National Securing Personnel System (NSPS), in comparison to the potential savings mere consolidation of like functions can yield.

**Justification:** The accomplishment of the Air Force Materiel Command missions at these aforementioned installations is directly dependent upon the Civilian Personnel Offices' ability to recruit, train, and retain/manage the 10,000-15,000 civilian personnel workforces located at each of these vital installations. These are the four installations with the largest civilian workforce populations in the Air Force with a collective civilian, serviced population of over 48,000, which clearly demands real time development and delivery of the most complex, multi-faceted human resource initiatives (i.e., NSPS) within the Air Force. This diverse workforce spans over 200 specialties ranging from aeronautical engineers to journeyman metal-working technicians. CPOs' that recruit, train, and retain/manage this responsibility requires face-to-face contact with the requirements generator (Organizational Commander), the potential suppliers of the work force, and, of course, the existing workforce. Randolph's support to these four bases today is chiefly via data systems and limited benefits/entitlements processing. To date, Randolph servicing responsibilities and processes have precluded it from expanding centralized support to the four large bases; hence, their designation and function as Interim Personnel Centers (IPCs).

Against the backdrop of the impending deployment of NSPS, to ensure the optimum number, balance and ownership (service or OSD) of “best of breed” regional personnel service centers, these centers must remain at the four locations identified. There must be a direct linkage of the personnel and education & training supplier to the Commander of these units. In other words, the clarion need for a Civilian Personnel organization headed by a senior manager responsible for policy and delivery of all personnel/force development programs and aligned under the Center Commander is a must. Direct, on-site interface with customer is the key – and critical.

**Recruitment:** Today these installations must recruit approximately 700-800 new personnel annually to maintain the mission capability required. These requirements are met by the local Civilian Personnel Offices through various on site, face-to-face programs to include direct contact with potential new employees, establishing co-op programs with local Universities and Technical Institutes, and local recruitment initiatives. Co-op programs pay extremely large dividends for the Air Force because often the training is actually funded by State entities. They also require enormous and continual direct dialogue with the supporting community and State entities. In other words, to obtain the best workforce, these massive recruitment efforts are more than simply loading a requirement into a computer database. While some future personnel requirements can be somewhat projected, history would no doubt verify that an immediate response capability is also required to maintain a viable workforce. For example, the unanticipated grounding and associated repair of a specific aircraft fleet or weapon sub-system generates unprecedented and urgent personnel requirements. Additionally, recruitment, and personnel management requirements in the future will undoubtedly rise due to the current aging workforce phenomena facing the Air Force Materiel Command. Moving the current personnel management capability from these critical locations to a consolidated location thousands of miles away puts at risk the ability to recruit and retain this vital resource.

**Training:** The effectiveness of any existing workforce is dependent on continuing training and education. Each of these locations spends millions of dollars annually on this function—all in response to workforce development, best practices opportunities, or mission change/workforce shaping requirements. The Commanders and leaders of these diverse workforces generate the training requirements. It is inconceivable how their training/retraining requirements can best be executed from a location thousands of miles away with managers who are unfamiliar with the specific characteristics of the requirements and the specific locale.

**Retention/workforce management:** The turmoil potentially associated with any large workforce can be significantly reduced with immediate face-to-face interface with the personnel charged with managing the workforce and the resultant quick issue resolution. Obviously there are literally thousands of workforce daily inquiries regarding career development, training, separation, worker’s compensation, death benefits, etc., that must be addressed by the local Civilian Personnel Offices through face-to-face dialogue. It must be remembered that approximately one-half of the civilian employees are direct workers who have no access to computers and will have

to be away from the direct labor jobs to try and reach their personnel specialist via phone. Failure to ensure these inquires are addressed in a timely manner will put personnel management at a severe risk.

***Bottom Line:*** Installations with large, industrial/technical/professional workforces and charged with weapon system sustainment and acquisition missions as found at the AFMC's large centers must have an on site personnel community to develop, tailor and deploy a holistic approach to personnel management for the host as well as geographically separate supported missions. Such a model provides the requisite agility and economy in the manner that optimizes support to the warfighter. It is the most cost effective and mission enabling platform. Consolidation of CPOs at Randolph is counter thereto. More to the point, it will pull a vital partner—the personnel community—out of the discussions and deliberations at the heart of achieving transformed acquisition and logistics centers, consistent with DoD strategic and tactical needs.

### **Proposed Alternative**

Several former Commanders of these installations were queried and the response was unanimous that the mission performed by these Civilian Personnel Offices is an integral ingredient in mission success and should be retained at the current locations. However, if organizational consolidation is necessary, then more fully realign select functions presently performed at the installation Civilian Personnel organizations, e.g., data systems and official personnel files, under the Air Force office at Randolph. But, there are a number of services and support that must remain at the large bases: strategic recruitment planning/execution; hire and staff of jobs via the customer/personnel "cell"; position management; organizational structure consultation; development/management of education/training activities with strategic partners, e.g., state universities, technical colleges; workforce management with expert focus on performance management systems, employee incentives and conduct/discipline; expert labor and employee management relations services; retention and utilization of the workforce; employment levels; etc. All of these capabilities are required on-site under a single personnel organization designed to facilitate provision of key advice and force enablers to the Center Commander, Wing Commanders, and the executive staff. Not only are these services in the manner described above vital to maintain the viability and mission effectiveness of logistics and product centers in today's dynamic and demanding environment, but are critical as well to the management of future assigned missions.

***Comparison:*** Moving these Civilian Personnel offices to Randolph would be analogous to moving all active duty recruiters to one central location versus having them located in their areas of responsibility or taking away a major air commander's entire Personnel Staff.

***Bottom Line:*** The recommendation to reverse this DoD recommendation is based solely on the potential adverse operational impacts associated with such a

consolidation. This recommendation would be rendered whether 50 people or 5,000 people would be moved from their current locations.

## **Establish Centers for Fixed Wing Air Platform Research, Development & Acquisition, Test & Evaluation**

**BRAC Recommendation: Realign Tinker Air Force Base, OK, Robins, Air Force Base, GA, and Hill Air Force Base, UT, by relocating fixed wing-related Air Platform Development and Acquisition to Wright Patterson Air Force Base, OH.**

Realign Wright Patterson Air Force Base, OH, by relocating fixed wing related Live Fire Test and Evaluation to Naval Air Weapons Station China Lake, CA.

### **DAYTON REGION RECOMMENDATION:**

**The Dayton Region supports the realignment of Tinker Air Force Base, OK, Robins, Air Force Base, GA, and Hill Air Force Base, UT, by relocating fixed wing-related Air Platform Development and Acquisition to Wright Patterson Air Force Base, OH.**

#### **Aeronautical Systems Center Statement**

The Aeronautical Systems Center (ASC) at WPAFB is well positioned to execute the recommendation to the Defense Base Closure and Realignment Commission to become a Center for Fixed Wing Air Platform R, D, & A. Today, the management of these critical functions is already provided by the System Program Offices (aka Wings, Groups, and Squadrons) at ASC for the majority of the Air Force's fixed wing air platforms. Over the past three decades, the co-location of the SPOs at ASC with the research activities conducted at the Air Force Research Laboratory (AFRL), also located at WPAFB, has resulted in critically important, accelerated technology transition from the research phase to the implementation into aircraft platforms.

Locating additional Fixed Wing Air Platform acquisition activities at WPAFB, where the Air Force Program Executive Officer for Aeronautical Systems is also located, will increase this valuable synergistic effect.

The R, D, & A infrastructure in terms of acquisition culture, intellectual expertise, and modern facilities is already present at WPAFB. Such a consolidation, as recommended by the BRAC commission, can be accomplished with a minimum amount of effort and disruption to ongoing programs. WPAFB is ready today to accept this expansion of its core mission that will have extensive benefits for programs across all of our military services.

**BRAC Justification:** This recommendation completes the consolidation of all Fixed Wing Air Platform RDAT&E, begun during the previous BRAC rounds, at two principal sites: Naval Air Station (NAS) Patuxent River, MD, and Wright-Patterson Air Force Base (AFB), OH, while retaining several specialty sites. Research and

Development & Acquisition will be performed at NAS Patuxent River and Wright-Patterson AFB. Lakehurst will be retained as a dedicated RDAT&E facility for Navy Aircraft Launch and Recovery Equipment and Aviation Support Equipment. This recommendation includes Research, Development & Acquisition and Test & Evaluation activities in Fixed Wing Air Platforms across the Navy and Air Force. The planned component moves will enhance synergy by consolidating to major sites, preserve healthy competition, leverage existing infrastructure, minimize environmental impact, and effect reasonable homeland security risk dispersal. The relocation of Fixed Wing Air Platform Research was previously accomplished in response to the S&T Reliance Agreements resulting in the consolidation at Wright Patterson AFB with the maritime related Fixed Wing Air Platform Research consolidated at NAS Patuxent River.

This recommendation consolidates Air Force Development & Acquisition functions currently resident at Logistic Centers (Hill AFB, Tinker AFB, and Robbins AFB) at Wright-Patterson AFB. These moves will increase efficiency by creating RD&A centers with all attendant support activity and a robust acquisition organization available to all Air Force Fixed Wing Air Platform D&A functions. The consolidation of all Fixed Wing Air Platform Survivability Live Fire T&E at China Lake is driven by the inefficiencies that currently exist between the two sites (Wright Patterson AFB and China Lake), and the potential savings afforded by establishing a single live fire test range for fixed wing air platforms. China Lake has this capability and has been doing similar work related to weapons lethality for many years. This action will increase efficiency by reducing overall manpower requirements while also reducing redundancies that exist across the Live Fire Testing domain.

**Payback:** The total estimated one-time cost to the Department of Defense to implement this recommendation is \$17.7M. The net of all costs and savings to the Department during the implementation period is a cost of \$7.9M. Annual recurring savings to the Department after implementation are \$2.7M with a payback expected in 9 years. The net present value of the costs and savings to the Department over 20 years is a savings of \$17.9M.

**Economic Impact on Communities:** Assuming no economic recovery, this recommendation could result in a maximum potential reduction of 43 jobs (22 direct jobs and 21 indirect jobs) over the 2006-2011 period in the Ogden-Clearfield, UT, Metropolitan Statistical Area, which is less than 0.1 percent of economic area employment.

Assuming no economic recovery, this recommendation could result in a maximum potential reduction of 33 jobs (15 direct jobs and 18 indirect jobs) over the 2006-2011 period in the Oklahoma City, OK, Metropolitan Statistical Area, which is less than 0.1 percent of economic area employment.

Assuming no economic recovery, this recommendation could result in a maximum potential reduction of 67 jobs (41 direct jobs and 26 indirect jobs) over the 2006-2011

period in the Warner Robins, GA, Metropolitan Statistical Area, which is 0.1 percent of economic area employment.

Assuming no economic recovery, this recommendation could result in a maximum potential reduction of 1 job (3 direct jobs lost and 2 indirect jobs gained) over the 2006-2011 period in the Dayton, OH, Metropolitan Statistical Area, which is less than 0.1 percent of economic area employment.

Source of Numbers	2006-2011 Period			Immediate			
	Direct Job Reductions	Indirect Job Reductions	Total	In Total (M/C/CM)	Out Total (M/C/CM)	Non-A&S Contractor	Total
<b>Fixed Wing Air Platform Survivability Live Fire T&amp;E</b>							
BRAC Report	(3)	2	(1)				
Local Validation	(15)	2	(13)			(78)	(91)
<b>Air Force Fixed Wing Air Platform D&amp;A</b>							
BRAC Report	78	65	143				
Local Validation							

The aggregate economic impact of all recommended actions on these economic regions of influence was considered and is at Appendix B of Volume I.

**Community Infrastructure Assessment:** A review of community attributes indicates no issues regarding the ability of the infrastructure of the communities to support missions, forces, and personnel.

**Environmental Impact:** A conformity analysis is required at Wright-Patterson. An initial analysis indicates a conformity determination is not required. Additional operations may impact archeological or historic areas, which may restrict operations. Additional operations at Wright Patterson may further impact the Indiana Bat, a threatened and endangered species. The hazardous waste program at Wright-Patterson will require modification. Additional operations at Wright Patterson may impact wetlands, which may restrict operations. This recommendation has no impact on dredging; land use constraints or sensitive resource areas; marine mammals, resources, or sanctuaries; noise; or water resources. This recommendation will require spending approximately \$0.2M for waste management and environmental compliance activities. This cost was included in the payback calculation. This recommendation does not otherwise impact the costs of environmental restoration, waste management, and environmental compliance activities. The aggregate environmental impact of all recommended BRAC actions affecting the bases in this recommendation have been reviewed. There are no known environmental impediments to implementation of this recommendation.

## **Defense Research Service Led Laboratories**

### **BRAC Recommendation**

Close the Air Force Research Laboratory, Mesa City, AZ. Relocate all functions to Wright Patterson Air Force Base, OH.

Realign Air Force Research Laboratory, Hanscom, MA, by relocating the Sensors Directorate to Wright Patterson Air Force Base, OH, and the Space Vehicles Directorate to Kirtland Air Force Base, NM.

Realign Rome Laboratory, NY, by relocating the Sensor Directorate to Wright Patterson Air Force Base, OH, and consolidating it with the Air Force Research Laboratory, Sensor Directorate at Wright Patterson Air Force Base, OH.

Realign Air Force Research Laboratory, Wright Patterson Air Force Base, OH, by relocating the Information Systems Directorate to Hanscom Air Force Base, MA.

### **DAYTON REGION RECOMMENDATION**

Recommend approval of the recommendations consolidating Sensors research and development at Wright-Patterson Air Force Base.

The world's foremost airborne electronic (Avionics) systems have evolved over 80-plus years at Wright-Patterson Air Force Base (WPAFB), Dayton, Ohio. This evolution came from the national leadership assigned to the precursor WPAFB organizations to the Sensors Directorate.

Unfortunately, over the years, growth of sensor-related functions at other locations has prevented Air Force Research Lab (AFRL) at WPAFB from gaining the benefits and synergy of a geographically consolidated sensor development function. The movement of these fragmented sensor functions from Hanscom and Rome to WPAFB will complete the consolidation of the Air Force's Sensor Science & Technology efforts that were begun in 1998 with the formation of AFRL. Locating these sensor activities adjacent to related technology directorates, e.g., Materials and Manufacturing, Air Vehicles, Human Effectiveness, and Propulsion and Power, will further enhance the development of sensor technology so critical to Air Force war fighting capabilities.

Moreover, collocation of a consolidated, full-spectrum sensors directorate with the major Air Force Program Acquisition Offices of the Aeronautical Systems Center will further the synergistic effects and help accelerate the rapid transition of new capabilities to the warfighter.

Testimony from New York individuals and organization at the Defense Base Closure and Realignment Commission regional hearing in Buffalo, New York, on June 27, 2005 regarding the recommendation to realign Rome Lab Sensors work to WPAFB, opposed the sensors move because:

- No BRAC analysis was done at the receiving site on some of the following Rome assets
- Rome has unique topography that is elevated and has no clutter
- Special radar antennae and labs were not considered in the cost of moving
- Required radio frequency licenses to do the work do not exist at WPAFB
- Rome has on-going critical work, done with the Army that cannot be interrupted
- Rome has significant intellectual capital that will not move with the work

The Dayton Region response to New York's Testimony regarding Rome's arguments/positions against realignment of the Sensor mission to WPAFB is:

1. The BRAC process examined every receiving site, including WPAFB, to determine if it could bed-down an influx of received assets due to realignment. Also, excess capacity will be generated in the Sensors Directorate at WPAFB due to the relocation of IF personnel to Hanscom AFB.
2. There are no known insurmountable issues with relocating the required equipment from Rome Labs to WPAFB. Antennae can be disassembled and reassembled.
3. Wright-Patt can quickly apply for RF licenses as once Rome did. It may be that the RF licenses may even be transferable.
4. On-going critical work with any mission can and will be interrupted or delayed slightly due to realignment. If it cannot be delayed, WPAFB's realignment planning team can work with the Army to have Rome's work temporarily performed by the Army.

Recommend the BRAC Commission approve the DOD recommendations in their entirety, particularly the consolidation of Sensors research at Wright-Patterson AFB. The movement of these fragmented sensor functions from Hanscom and Rome to WPAFB will complete the consolidation of the Air Force's Sensor Science & Technology efforts that were begun in 1998 with the formation of Air Force Research Laboratory. Locating these sensor activities adjacent to related technology directorates, e.g., Materials and Manufacturing, Air Vehicles, Human Effectiveness, and Propulsion and Power, will further enhance the development of sensor technology so critical to Air Force war fighting capabilities.

**BRAC Justification:** This recommendation realigns and consolidates portions of the Air Force Research Laboratory to provide greater synergy across technical disciplines

and functions. It does this by consolidating geographically separate units of the Air Force Research Laboratory.

A realignment of Air Force Research Laboratory Human Factors Division from Brooks City Base, TX, research to Wright Patterson AFB was initially part of this recommendation, and still exists, but is presented in the recommendation to close Brooks City Base, TX. This recommendation enables technical synergy, and positions the Department of the Defense to exploit a center-of-mass of scientific, technical, and acquisition expertise.

**Payback:** The total estimated one-time cost to the Department of Defense to implement this recommendation is \$164.6M. The net of all costs and savings to the Department during the implementation period is cost of \$45.0M. Annual recurring savings to the Department after implementation are \$41.1M, with a payback expected in 4 years. The net present value of the costs and savings to the Department over 20 years is a savings of \$357.3M.

## Establish Centers for Fixed Wing Air Platform Research, Development & Acquisition, Test & Evaluation

**BRAC Recommendation:** Realign Wright Patterson Air Force Base, OH, by relocating fixed wing-related Live Fire Test and Evaluation to Naval Air Weapons Station China Lake, CA. The consolidation of all Fixed-Wing Air Platform Survivability Live Fire T&E at China Lake is driven by the inefficiencies that currently exist between the two sites (Wright Patterson AFB and China Lake), and the potential savings afforded by establishing a single, live-fire test range for fixed-wing air platforms. China Lake has this capability and has been doing similar work related to weapons lethality for many years. This action will increase efficiency by reducing overall manpower requirements while also reducing redundancies that exist across the Live Fire Testing domain.

Assuming no economic recovery, this recommendation could result in a maximum potential reduction of 1 job (3 direct jobs lost and 2 indirect jobs gained) over the 2006-2011 period in the Dayton, OH, Metropolitan Statistical Area, which is less than 0.1 percent of economic area employment.

Source of Numbers	2006-2011 Period			Immediate			
	Direct Job Reductions	Indirect Job Reductions	Total	In Total (M/C/CM)	Out Total (M/C/CM)	Non-A&S Contractor	Total
<b>Fixed Wing Air Platform Survivability Live Fire T&amp;E</b>							
BRAC Report	(3)	2	(1)				
Local Validation	(15)	2	(13)			(78)	(91)

### Dayton Region Recommendation

The Dayton Region believes the realignment of Wright-Patterson's live-fire T&E at China Lake will negatively impact the live-fire testing of AF-unique weapon systems. The number of FTEs in the BRAC report does not reflect the actual positions involved with the Live Fire mission. The Dayton Region recommends: Implement a Cooperative Service Plan for LFT&E alternative. This approach would establish a cooperative relationship that benefits each Service and ensures the technical community can adequately respond to the requirements of acquisition managers and the Services' RDT&E needs. Each facility plays a significant role in the conduct of research and developmental testing as well as general test and evaluation for its respective Service.

Closing a facility bears a high risk of diminishing the availability and quality of support essential to the Services and ultimately to the warfighter. Each facility is

somewhat unique in the context of the types of research and development, and general test and evaluation functions they perform. However, taken as a composite capability, these facilities are unique in the Free World and ensure the peacetime safety, combat survivability, and combat effectiveness of operational forces.

The Dayton Region recommends development of an Air Force/Navy Memorandum of Agreement to implement this alternative should be undertaken with the overarching goal of optimizing technical support to programs to meet acquisition milestones and leverage future LFT&E facility investments (See attached DoD Live Fire Test and Evaluation Facilities Study that similarly recommends development of an Air Force/Navy MOA).

### **Study Attachment**

In a November 30, 1999, tasking memo from the Test and Evaluation Board of Directors (BoD) Chairman, the Navy was designated to lead a study of Department of Defense (DoD) Live Fire Test and Evaluation (LFT&E) Facilities (Appendix A). This study is part of a Section 912(c) effort to identify cross-Service efficiencies. The study focuses on optimizing support to the acquisition community.

Each Service currently maintains and operates facilities that perform, among other things, survivability LFT&E of air vehicles at the following locations:

- Army – Aberdeen Proving Ground, Maryland
- Navy – China Lake, California
- Air Force – Wright-Patterson Air Force Base, Ohio

Generally, the goal of Section 912(c) study efforts is to reduce duplication and non value-added work of the laboratories and T&E centers, so they become more efficient per unit of technical output, not to reduce the scale of their technical programs. The overarching objective of Section 912(c) is to “Streamline the Department of Defense (DoD) Science and Technology (S&T), Engineering, and Test and Evaluation (T&E) infrastructure, commonly referred to as the Research, Development, Test, and Evaluation (RDT&E) infrastructure.”

Specifically, the Team was to look at two alternatives: 1) closing any one of the facilities and distribution of total mission functions to the remaining facilities and 2) all three facilities remain open, with the formation of a standing group with the mission of promoting increased inter-Service coordination and further efficiencies in live fire testing.

The scope of the study included examination of:

- The scope of customer requirements - R&D, T&E, and LFT&E
- The existing and future business base of each facility (through FY05) - R&D, T&E, and LFT&E (dollars only)
- The current capabilities of each facility
- The current facility operational cost, infrastructure cost, and investment plans

- The total cost to the taxpayer, including all direct and indirect costs (including infrastructure)
- The cost/benefits of closing one LFT&E facility
- Cooperative teaming to promote increased inter-Service efficiencies

The Navy was requested by the Test and Evaluation Board of Directors (BoD), as part of a Section 912 effort, to identify cross-Service efficiencies for the Department of Defense (DoD) Air Vehicle Vulnerability Live Fire Test and Evaluation (LFT&E) facilities. Three such DoD facilities were considered within this report: the Army Research Laboratory's Air Base Experimental Facility at Aberdeen Proving Ground, Maryland, the Weapons Survivability Laboratory at the Naval Air Warfare Center at China Lake, California, and the **46th Test Wing's Aircraft Survivability Research Facility at Wright-Patterson Air Force Base, Ohio**. A cross-Service team of individuals, consisting of experts from within the LFT&E community, assessed the potential for producing LFT&E efficiencies through either test facility consolidation, or increased tri-Service test coordination. Consistent with the Terms of References (TOR), this study focused on aircraft vulnerability facilities only. Other LFT&E facilities, (e.g. lethality), exist but were not evaluated.

For each of these facilities, the Team considered technical capabilities, workload (in terms of revenue), workforce, and indirect costs of doing business. The study Team estimated the cost to either mothball or demolish a facility if one was closed. Also summarized were potential impacts to each of the Service's acquisition processes as a result of a closure. Finally, the study Team considered, as an alternative to closing a facility, ways to improve inter-Service efficiencies and sharing of resources if the three facilities remain operational.

The evaluation process considered several quantitative and qualitative factors. The Team gathered information to describe technical capabilities of each facility and arrived at a consensus to represent the workload at each facility in terms of source of funding and type of work performed, Research and Development (R&D), Test and Evaluation (T&E), and Live Fire Test and Evaluation (LFT&E). The evaluation focused on **closure costs and issues of risk associated with each Service's acquisition processes**. Closure costs, both mothballing and demolition, were calculated to identify maximum potential savings. Costs were identified relative to any recurring cost associated with site maintenance after closure and test team costs for travel to an alternate test site. The potential savings relative to the reduction in business operations, infrastructure, and investment costs were also calculated. However, potential business cost savings associated with facility closure could not be expected to be 100 percent and thus were assumed to be 50 percent of the facility's indirect operational costs, 66 percent of its infrastructure costs, and 66 percent of its investment costs. Recurring costs were subtracted from the savings. Negative differences indicated there would be no savings. Positive differences were divided into the overall cost of closure to determine the payback period-of-return on such a decision. A reasonable payback period was considered to be within 10 years.

Other qualitative evaluation factors considered were programmatic impacts and loss of Service-unique capabilities and expertise. **Disadvantages included the loss of RDT&E synergy and overall increased risk to weapons system development programs and their associated schedules and cost.**

**As an alternative to closing a facility, the Team considered the concept of implementing additional cross-Service or inter-Service teaming (Cooperative Planning for LFT&E) that can improve planning and sharing of resources through cooperative teaming. Teaming will realize most of the advantages of closure without associated costs, risks, and disadvantages.**

The Team found that the **technical capabilities at each site are tailored to each of the Service's acquisition needs.** Differences exist in the facilities' size and the type of testing performed to support Service missions. The Army Research Laboratory facility supports both rotary-wing and ground system methodology development under the Army Science and Technology (6.2) program and rotary-wing T&E and LFT&E. The Army workload is approximately equally split between RDT&E and LFT&E. The Navy has a similar split in workload shared between RDT&E and LFT&E for both rotary and fixed-wing air vehicles. The Air Force workload is entirely fixed-wing aircraft and is more heavily focused on LFT&E than RDT&E. The LFT&E workload for all facilities is 52 percent of the total workload and leverages the other 48 percent RDT&E investment to provide test capabilities. Because the R&D mission is earlier in the acquisition process, new capabilities built for R&D offer considerable leveraging to T&E and LFT&E. These facilities are obviously not supporting just LFT&E; hence closing a Service's LFT&E facility weakens established continuities between R&D, T&E, and LFT&E and the ability to support a seamless acquisition process. Closing a Service's LFT&E facility will undesirably affect that Service's acquisition systems and built-in efficiencies of operation.

**The cost associated with closure and mothballing of any Service's facility ranges between \$1.8M and \$3.2M. The cost of operating these facilities is small compared to the recurring costs to maintain mothballed facilities and send their test teams to alternate test sites. Hence, annual cost savings cannot be realized by closing and mothballing any one of these test facilities.** Closure with demolition is more costly (ranging between \$5.5M and \$6.9M).

In addition to cost, **there are a number of issues and risks associated with closing a Service facility.** The Team's primary concern is the high probability that the outcome would be an **unacceptable cost and schedule risk to major acquisition programs.** Another concern is the **impact on the already limited and highly skilled human resources** devoted to aircraft survivability. **Within all of DoD for fiscal year 2000, there were only 22 civil servants responsible for day-to-day facility operations in support of both fixed-wing and rotary-wing vulnerability testing.** In addition, there was a **flexible contractor workforce** of 66 personnel that supported the direct-funded workload. **Closure of any facility will likely result in**

**the loss of significant expertise to support air system vulnerability testing and design within DoD.**

Analysis of cost data, advantages, disadvantages, and risks associated with closure (either mothballing or demolition) led the Team to conclude that closure of any Service test facility is contrary to the best interests of the Service acquisition structure, the live fire test and evaluation community, the warfighter, and the taxpayer. Live fire test capabilities are an integral and a very important part of the RDT&E continuum. It is within this system that Service test organizations perform the myriad of missions that are germane to their Service's acquisition executives. Closure of any facility would create hand-offs in the acquisition process and negate existing in-service efficiencies.

As an alternative to closure, the Team looked at a means to increase tri-Service test coordination. This alternative, Cooperative Planning for LFT&E, would bring together facility managers to participate in cooperative workload and facility investment planning and sharing of lessons learned. The Team recommends this alternative, which would be implemented in the form of a Memorandum of Agreement (MOA). The MOA would be structured to capitalize on coordination in the area of capabilities investment and optimization of facility support to programs. Currently, very valuable coordination exists between the Services through participation in the Joint Technical Coordination Group on Aircraft Survivability (JTTCG/AS), Joint Live Fire (JLF) programs, and other joint forums, e.g., Live-Fire Symposia. However, none of these groups focus on cross-Service coordination relative to facility investments. Increased coordination offers the opportunity for the Services to present unified LFT&E facility modernization planning to take advantage of programs, such as the Central Test and Evaluation Investment Program (CTEIP). This approach will also optimize technical support to acquisition programs and leverage lessons-learned. The Cooperative Planning for LFT&E alternative produces most of the advantages of closure without the associated costs, risks, and disadvantages.

The Team found that the technical capabilities at each site are tailored to each of the Service's acquisition needs. Differences exist in the facilities' size and type of testing performed to support Service missions. The Army Research Laboratory facility supports both rotary-wing and ground system methodology development under the Army Science and Technology (6.2) program and rotary-wing T&E and LFT&E. The Army workload is approximately equally split between RDT&E and LFT&E. The Navy has a similar split workload between RDT&E and LFT&E for both rotary and fixed-wing air vehicles. The Air Force workload is entirely fixed-wing aircraft and is more heavily focused on LFT&E than RDT&E. The LFT&E workload for all facilities is 52% of the total workload and leverages the other 48% RDT&E investment to provide test capabilities. Because the R&D mission is earlier in the acquisition process, new capabilities built for R&D offer considerable leveraging to T&E and LFT&E. Closing a Service's LFT&E facility weakens established continuities between R&D, T&E, and LFT&E and the ability to support a seamless

acquisition process. Closing a Service's LFT&E facility will undesirably affect that Service's acquisition systems and built-in efficiencies of operation.

The cost associated with closure and mothballing of any Service's facility ranges between \$1.8M and \$3.2M. The cost of operating these facilities is small compared to the recurring costs to maintain the mothballed facilities and send their test teams to alternate test sites. Hence, annual cost savings cannot be realized by closing any one of these test facilities. Closure with demolition is more costly (ranging between \$5.5M and \$6.9M).

In addition to cost, there are a number of issues and risks associated with closing a Service facility. The Team's primary concern is the high probability that the outcome would be an unacceptable cost and schedule risk to major acquisition programs. Another concern is the impact on the already limited and highly skilled human resources. Within all of DoD for FY00, there are only 22 civil servants responsible for the day-to-day facility operations in support of both fixed-wing and rotary-wing vulnerability testing. In addition, there is a flexible contractor workforce of 66 personnel that support the direct-funded workload. Closure of any facility will likely result in the loss of significant expertise to support air system vulnerability testing within DoD.

Analysis of cost data, advantages, disadvantages, and risks associated with closure (either mothballing or demolition), led the Team to conclude that closure of any Service test facility is contrary to the best interests of the Service acquisition structure, the live fire test and evaluation community, the warfighter, and the taxpayer. Live fire test capabilities are an integral and a very important part of the RDT&E continuum. It is within this system that they perform the myriad of missions germane to their Service's acquisition executives. Closure of any facility would create hand-offs in the acquisition process and negate existing in-service efficiencies.

### **Terms of Reference (TOR)**

The following is a synopsis of the TOR. The complete TOR is provided in Appendix C. Consistent with the thrust of the Air Vehicles Sector Panel and Section 912(c) guidelines, this study addresses Department of Defense (DoD) facilities conducting air vehicle survivability LFT&E. Each Service currently maintains and operates facilities that perform, among other things, survivability LFT&E of air vehicles at the following locations:

- Army – Aberdeen Proving Ground, Maryland
- Navy – China Lake, California
- Air Force – Wright-Patterson Air Force Base, Ohio
- The present study is an examination of air vehicle LFT&E facilities to determine if opportunities exist to achieve infrastructure efficiencies among those facilities.

## **Scope of Report and Methodology**

Section II of this report describes each Service's LFT&E facilities and capabilities and workforce along with financial information. Included is a discussion of efficiencies that each Service has achieved to leverage and streamline their acquisition process. The level of support provided by existing LFT&E facilities established the baseline for an evaluation of alternatives.

In Section III, the Team evaluates various alternatives and develops a high-level assessment of potential savings and the costs of implementing those alternatives.

Section IV provides a summary assessment of potential net savings or costs, technical issues, risk, and associated advantages and disadvantages of each alternative. Findings and recommendations are presented in Section V. Report appendices include reference materials and detailed discussions of each DoD test facility.

## **Introduction**

This section outlines the three Department of Defense (DoD) live fire (aircraft vulnerability) test facilities located at the Army's Aberdeen Proving Ground, Maryland, the Naval Air Warfare Center at China Lake, California, and the 46th Test Wing's facility at Wright-Patterson Air Force Base, Ohio. Each of the Service's facilities and capabilities are summarized within this section. More details relative to each Service's facilities and capabilities can be found in the appendices. In addition, workload, workforce, financial, recent organizational efficiencies, and Service benefits are presented by each of the Services.

Workload is identified in terms of total "source of funds" generated by the facility for fiscal years (FY) 1997 to 2005. Source of funds include customer revenue and other funding such as Military Construction (MILCON) and Special Project (SP). Customer revenue is defined by all direct and indirect costs to the customer to perform required testing. This includes funds to operate, maintain, and improve a facility as well as funds to buy and install equipment. Customer revenue was further broken out in terms of the nature of work performed. Specifically, the Team elected to breakdown customer revenue into the categories of Research and Development (R&D), Test and Evaluation (T&E), and Live Fire Test and Evaluation (LFT&E) testing as defined Title 10 USC Section §2366. All of the Service test facilities support more than just LFT&E testing. Much of the work supports coexisting R&D and T&E missions. For example, the Army's facility also conducts RDT&E in support of ground vehicle vulnerability and modeling and simulation.

As noted above, customer revenue includes all indirect business costs to operate, maintain, and repair the facilities, including investments. Because a portion of these costs may be converted to savings if a facility is closed, these indirect business costs are identified and broken out separately for each fiscal year. The following definitions are provided for clarification:

- **Source of Funds:** All funding including Customer funding (direct funding revenue), MILCON, Special Project, etc.

- **Customer Revenue:** All direct and indirect funding associated with conducting R&D, T&E, and LFT&E testing within the Service LFT&E facilities. Included are dollars necessary to operate, maintain, and improve a facility, as well as dollars associated with the purchase and installation of equipment.
- **MILCON and Special Project Funding:** Another category of funding which, for the purpose of this study, is included in total Source of Funds or cost to the taxpayer. These costs include larger investments in facilities, such as those associated with major construction or facility alteration projects.
- **Direct Costs:** Costs associated with directly supporting technical aspects of test-program accomplishment, to include government and contractor labor, material, travel, etc.
- **Indirect Costs:** “The costs of doing business.” These costs are subdivided into three major categories;
  1. **Operation Costs:** Costs for government/contractor management and administrative support, safety and security, environmental, and equipment maintenance.
  2. **Infrastructure Costs:** Base support and utilities (air conditioning, heat, lights, phones) costs.
  3. **Investment Costs:** The costs for major equipment and facility improvements (over \$50,000/item) that contribute to the facility's overall capabilities.

In addition, a series of annual business cost-revenue ratios (percentages) were generated. These ratios depict the cost percentage necessary to produce a level of revenue, as well as the percent change in cost relative to a change in revenue.

Next, each of the Services identifies their activity's workforce broken out by civilian, military, and contractors and summarized them by fiscal year (FY97-05). Also, each of the Services provides evidence of organizational efficiencies realized since FY97. These efficiencies suggest that the Services are managing their staffs and facilities to optimize customer support services tailored to meet Service acquisition needs.

It should be noted that each Service accounts for cost differently. Historical costs are based on available accounting data. However, for out-years, all cost and revenue figures are rough estimates given the availability of workload planning data and availability of accurate estimates for closing facilities. Finally, each Service provides evidence of Service benefits realized since FY97. These examples demonstrate that the Services are managing their staffs and facilities to optimize customer support Services tailored to meet Service acquisition needs.

## **Recommendations**

1. The Team recommended implementing the Cooperative Planning for LFT&E alternative. This approach establishes a cooperative relationship that benefits each Service and ensures the technical community can adequately respond to

the requirements of acquisition managers and the Service's RDT&E needs. Each facility plays a significant role in the conduct of research and developmental testing as well as general test and evaluation for their respective Services. Closing a facility bears a high risk of diminishing the availability and quality of support essential to the Services and ultimately to the warfighter. Each facility is somewhat unique in the context of the types of research and development and general test and evaluation functions they perform. However, taken as a composite capability, these facilities are unique in the Free World and ensure the peacetime safety, combat survivability, and combat effectiveness of operational forces.

2. Development of a draft MOA to implement this alternative should be undertaken with the overarching goal of optimizing technical support to programs to meet acquisition milestones and leverage future LFT&E facility investments.

## **Dayton Defense Finance and Accounting Service**

### **BRAC Recommendation: Close the Defense Finance and Accounting Service (DFAS) site at Dayton, OH.**

#### **DAYTON REGION RECOMMENDATION**

Throughout the DFAS BRAC process the focus has been on saving and reducing the cost of operations. DFAS needs Centers/Sites that can deliver exceptional Financial Services to the Department of Defense for the least cost. We agree with this standard because DFAS-Dayton is doing this, and has done it for many years. Therefore, we are requesting **DFAS-Dayton be selected as a Center/Site to remain open and a receiver site for DFAS.**

We concur with DFAS site consolidation and believe that DFAS should assign the responsibility to a single Center/Site for a consolidated Air Force, field-level, operational database. DFAS-Dayton should be assigned responsibility for managing this single database because it manages the largest portion of that database today and is located close to the largest Air Force customer.

#### **COST**

The DoD BRAC calculations for the square footage for DFAS Dayton are in error. DFAS-Dayton currently occupies a building with 202,625 gross square feet, not the 81,605 square feet available (50,080 sq ft used) in the BRAC calculations. In fact, DFAS-Dayton's facility has the space and most of the systems furniture to accommodate over 950 personnel – **at a near-rent-free cost.** An additional 500,000 plus square feet is also available for \$1.00 per year. DFAS-Dayton can easily add another 2000 jobs to the Kettering Business Park with a minimum cost to DFAS. The DoD and DFAS could save millions of dollars by consolidating other costlier Centers/Sites into the DFAS-Dayton low cost location. This represents a major savings for BRAC and the taxpayers.

Of all the DFAS sites, DFAS-Dayton is the **lowest cost** Center/Site of DFAS. DFAS-Dayton facilities and space cost allocation per square foot is \$2.88. The range of DFAS' facility cost, as of March 2005, is from \$2.88 to \$82.36 per square foot. DFAS-Dayton is extremely cost effective, plus, it has more low cost space for growth.

#### **QUALITY AND CUSTOMER SERVICE**

DFAS-Dayton ranks in the top with quality customer service and has employees with the highest morale in DFAS for the last three years according to the DFAS Organizational Assessment Survey (OAS). The OAS measures 17 dimensions that

organizational research and practice show are related to high performance in public and private sector organizations. In addition, DFAS-Dayton has received hundreds of positive feedback responses through the Interactive Customer Evaluation survey (ICE). Approximately 98% of the customers' input is in regard to the DFAS-Dayton employee high-quality work and attention to detail.

DFAS-Dayton is located within 20 minutes of DFAS' largest customer's headquarters. The Air Force Materiel Command Headquarters is located at Wright Patterson Air Force Base. The close proximity of DFAS-Dayton to its largest customer is a vital element to DFAS-Dayton providing exceptional "face to face" customer service. In addition, DFAS-Dayton is within driving distance to three major airports making it convenient and cost effective to visiting customers and DFAS – Dayton employees who travel.

### **FINANCIAL SERVICES EXPERIENCE**

DFAS-Dayton is an effective and efficient operation that is currently responsible for servicing 75 percent of the total Air Force funds. DFAS-Dayton provides Accounting and Finance services to 108 bases and agencies. DFAS-Dayton has responsibility for the largest databases of the entire DFAS agency.

The Dayton database supports 100 percent of the service to Air Force Materiel Command (AFMC), Air Force Space Command (AFSPC), and Air Mobility Command (AMC), Air Force Reserve Command (AFRC), U.S. Transportation Command (USTRANSCOM), and about 50 percent of Air National Guard (ANG). In addition, DFAS-Dayton provides services to others Defense agencies such as Defense Secret Service (DSS), Uniformed Service University of Health Sciences (USUHS), National Geospatial Intelligence Agency (NGA), Bolling AFB and Air Force Academy.

DFAS-Dayton already owns the accounting database for DFAS Sites at San Bernardino, Omaha and the Air force part of Orlando's work. Therefore, we recommend that these DFAS operation's personnel be realigned to the DFAS Dayton site. Consolidating these sites at DFAS-Dayton makes financial, operational and geographic sense and would generate a significant saving.

The Defense Finance and Account Service located in Kettering, Ohio, should be selected by the BRAC Commission as a receiver Center/Site. We are recommending the complete consolidation of all the Air Force DFAS service to Kettering Business Park. DFAS-Dayton has the support of the community, is strategically located for easy access, has the highest morale/quality employees, has an extremely low cost of operations, and is located with additional space to expand for \$1.00 per year.

## **RATIONALE FOR MAKING DFAS-DAYTON A RECEIVER SITE**

- The City of Kettering would suffer an annual earnings impact loss of \$34 million.
- The City of Kettering lost over 2000 jobs during the 1993 BRAC. This will be the second time that a DoD BRAC recommendation targeted Kettering. Kettering has yet to recover from the 1993 BRAC loss of 2500 jobs. The proposed loss of another 595 direct and indirect jobs will have had a crippling effect on the Kettering economy.
- Government Agencies have invested over \$40 million in the redevelopment of Gentile Air Force Station into the Kettering Business Park. DFAS-Dayton is an anchor located within the Park.
- DFAS operating review standards identify DFAS-Dayton as one of the most efficient DFAS operations.
- DFAS-Dayton has a strong military value ranking and is strategically located within 20 minutes of Wright Patterson Air Force Base.
- DFAS-Dayton's current location offers ample expansion capacity within its facility and adjacent facilities and adjacent facilities for "\$1.00 per year."
- BRAC projected savings associated with closing DFAS-Dayton are small in relation to the benefits to be gained by consolidating DFAS support for AFMC and the Air Force in Kettering Business Park.
- The DFAS-Dayton has the highest employee morale and quality for the last three years in the entire DFAS agency according to the agency annual OAS survey.
- The quality of the work performed at DFAS-Dayton has exceeded the expectation of many Senior Executives in the agency and customers according to the ICE surveys.
- DFAS-Dayton had already merged three other site databases into DFAS-Dayton's accounting system. DFAS-Dayton has Omaha, San Bernardino and the Air Force's Accounting and Finance for Orlando. This is a very important element because it shows that DFAS-Dayton knows how to consolidate workload successfully, and at the same time, maintain the quality that the Department of Defense expects.
- DFAS-Dayton has well a trained and capable workforce. This strong foundation is necessary to assure newly realigned employees get training quickly and accurately to keep up with new workloads. This accelerated training alone will save millions of dollars by preventing interest payments due to late vendor payment. DFAS-Dayton can hire more quality employees for less because the cost of living in Dayton is low. The majority of DFAS-Dayton's work force is GS-05, 06, 07 and they could not move to a high cost of living city and maintain the same quality of life. We believe that many of the other DFAS locations will not be able to employ the necessary number of people as a result the low grades required to do the job.

- DFAS-Dayton will continue to have “face to face” interactive service with the largest customer, HQ AFMC, and easy access for all others by three major airports and two Ohio Interstate highways.
- The main point is COST. DFAS-Dayton has one of the lowest costs of operation and the lease of the building will never increase. DFAS-Dayton currently has over 400 employees, and Kettering Business Park can accommodate up to 2,000 employees with a rent of \$1.00 per year for the next 50 years.
- Collocating additional AFMC service at DFAS-Dayton will enhance AFMC’s mission and add military value to the warfighter. Close customer contact between DFAS-Dayton and AFMC is not only important for day-to-day processing of billions of dollars generated by AFMC requirements for disbursements to pay recipients, but helps to insure that AFMC becomes Chief Financial Officer (CFO) Act compliant. Additionally, AFMC has a key Air Force role in implementing of the DOD Business Enterprise Architecture (BEA) Program (formerly BMMP). BEA is an effort to integrate financial management and business operations into a joint Defense Department business enterprise. Retaining a close geographical proximity between DFAS and AFMC will enhance the achievement of BEA objectives.
- The cover page of DFAS’ Strategic Plan of September 2004, is titled, “**It’s About The Customer.**” We believe the focus should be on optimizing customer service: In fact, Director Zack Gaddy states, “Our strategy must place our customers’ needs in the forefront and must be fully informed by the voice of our customers.” The Dayton Region recommendation focuses on the needs of one of DFAS’ largest customers, HQ AFMC and the Air Force. With execution responsibility for over 50% of the Air Force budget, AFMC requires close customer contact with its service provider, DFAS. This is presently occurring for the missions accomplished by DFAS-Dayton. In fact, we recommend that the BRAC Commission build on this quality support and integrate even more of AFMC’s and the Air Force’s DFAS support to the DFAS-Dayton location.

**Economic Impact on Communities:** Assuming no economic recovery, this recommendation could result in the maximum potential job reductions (direct and indirect) over the 2006-2011 period, as follows:

Source of Numbers	2006-2011 Period		
	Direct Job Reductions	Indirect Job Reductions	Total
BRAC Report	(230)	(195)	(425)
Local Validation	(296)	(195)	(491)
Current Numbers	(400)**	(195)	(595)

\*\*Currently, the total employees at DFAS-Dayton number 400 direct

### **Other Facts and Data**

#### **Bldg. 45 DFAS-Dayton, Kettering Business Park:**

Ground Floor Gross Square Footage: 101,300 g.s.f.  
Second Floor Gross Square Footage: 95,625 g.s.f.  
Third Floor Gross Square Footage: 5,700 g.s.f.  
Gross Square Footage: 202,625 g.s.f.

The systems furniture plans (AS Builts) dated January 17, 1997 reveal the following potential headcount:

#### **Ground Floor:**

349 technical/clerical cubicles  
2 supervisor cubicles  
23 private offices  
6 support staff in Lektreiver areas/copying areas  
380 positions total

#### **Second Floor:**

505 technical/clerical cubicles  
5 supervisor cubicles  
2 private offices  
8 support staff in Cafeteria/files  
520 positions total

#### **Third Floor:**

50 occupants allowed by Ohio Building Code

**TOTAL NUMBER OF OCCUPANTS FOR BUILDING 45: 950**

Building 46 - "A" Bay Building that is attached to DFAS-Dayton Building (Would need MILCON):

Ground Floor gross square footage: 80,000 g.s.f.  
Mezzanine gross square footage: 8,885 g.s.f.  
Total gross square footage: 88,885 g.s.f.

Based upon occupant per square foot ratios established for the current layout in Building 45, Bay A of Building 46 should reasonably accommodate an additional 400 occupants.

Therefore, total potential DFAS employees = **1,350**

Current operating cost (May 2005): \$2.88 psf (**lowest on record**)

## **Consolidate Air and Space C4ISR Research, Development and Acquisition, Test and Evaluation**

### **DoD BRAC Recommendation**

Realign Wright-Patterson Air Force Base, OH, Maxwell Air Force Base, AL, and Lackland Air Force Base, TX, by relocating Air & Space Information Systems Research and Development & Acquisition to Hanscom Air Force Base, MA.

### **DAYTON REGION RECOMMENDATION**

Retain the Development and Fielding Systems Group (DFSG) and other Operational Support Systems Group (OSSG) elements at Wright-Patterson Air Force Base (AFB)

### **HIGHLIGHTS OF ANALYSIS:**

- **Bottom Line – Significant deviations in the application of BRAC Selection Criteria, Military Value, are evident.**
- **An assessment of the chronological DoD TJCSG data indicates that this recommendation was “Strategy Driven”.**
- **If collocation were the strategy, it would have been more reasonable and less costly to move the 20 OSSW personnel at Hanscom AFB to WPAFB.**
- **The Dayton-Springfield MSA Economic Impact/Job loss is significantly understated.**
- **The BRAC Recommendation is “tainted” by Massachusetts’ \$410M offer - “If you keep Hanscom open, we will expand it for you.”**
- **Certified data in the BRAC Report shows only 8.4 acres available for a “roughly 40 acre” requirement. Hanscom recently redesignated previously restricted land by offering to utilize recreational areas and parking lots, all of which are non-contiguous, disconnected and odd-shaped for construction.**
- **Contractor Manpower Equivalents (embedded contractors) were not properly counted as mission resources.**
- **Costs of realignment were understated in DOD analysis**
  - **Increases in Embedded Contractor Costs not counted**
  - **Hanscom population increases by 50%, yet BOS increases only 24%**
  - **Hanscom population increases by 50%, yet sustainment increases only 12%**
- **Savings were overstated**
  - **Increased cost of Boston-based contractors will exceed \$14 million per year.**

- **Deltas in Direct development contractor costs are not included. Net Present Value “savings” of \$229M in DOD BRAC recommendation is really a “loss” to DOD of nearly \$1B**
- **DFSG’s Business Systems Mission was improperly categorized as C4ISR.**

## Summary of Rationale to Reject BRAC Recommendation

1. There is a **clear risk of failure** in DFSG operations supporting acquisition programs, thereby, jeopardizing logistics support for warfighting commanders. This represents a **substantial deviation from final criteria 1**, the current and future mission capabilities, because of the potential for lowered performance and schedule delays due to the realignment of DFSG and OSSG elements to Hanscom AFB.
2. As Table I illustrates, the Defense Department **understates personnel loss** in the Dayton area (2250 jobs lost, according to original estimate, versus 6,612). Moreover, local Dayton Region Information Technology (IT) contractors supporting DFSG’s acquisition mission are part of the **intellectual capital** and not accounted for in the calculation of military value. Neither development nor Advisory and Assistance Service (A&AS) DFSG on-site contractors were factored into the BRAC COBRA equation. This skews the actual costs of realignment (**substantial deviation from final criteria 1 and 4**). The Dayton Region’s calculations (please see Tables and Charts A, B, and C below) reveal that, **rather than the Defense Department reported saving of \$229 million dollars, there would be a loss to DOD of \$421 million**. This loss to DOD exceeds \$800 million when the number of *development* contractors affected by the realignment is considered.

**Table I  
Personnel Projections**

Source of Numbers	2006-2011 Period			Total
	Direct Job	Indirect Job	Non-A&AS	
BRAC Report	(1262)*	(988)	0	(2250)
Local Validation	(1462)	(2300)**	(2400)	(6162)

\* 715 current Direct Contractors (A&AS) **not accounted for** in BRAC COBRA Analysis and exist on the OSSW Manning Chart (as of 04 December 2004) for a total of 1462 direct jobs

\*\* An indirect factor of 1.57 stated in the Economic Impact Analysis more accurately reflects indirect jobs and is used in Air Force Base calculations

3. In the COBRA analysis, TECH-0042, page 45, the data estimate that 55% of the 606 Civilians, or 333 civilians, will move to Boston. The TECH-0042 COBRA Analysis uses a “Standard Civilian annual salary” of \$59,959.18, page 20, which equates to a GS-10 Step 8 in the Boston area (General Schedule Salary table for Hanscom AFB). Page 20, TECH-0042 COBRA Analysis, also reflects a Standard “Civilians Not Willing to Move” as 6% of the civilian population. Of the current 606 DFSG Civilians, 247 civilians (40%) will be eliminated and 359 civilian positions will be realigned to the Hanscom AFB UMD. In addition, the 715 current A&AS direct contractors are not factored into the analysis. Of the current 142 DFSG Military position, only 39 will realign to Hanscom (27%), page 6, Economic Impact Data. On the same page, the data reflects that DFSG will lose 658 Direct Contractors (**This direct contractor recognition is not reflected in the COBRA data**). In summary, 1462 direct personnel support the current DFSG mission at WPAFB. The BRAC recommendation indicates it can continue the mission with 39 Military, 359 civilians, and 658 direct contractors, for a total of 1056 personnel, a reduction of 28%.

Table A and Chart A below are from the TJCSG COBRA analysis (COBRA Net Present Value Report [COBRA V6.10] 4-20-05, page 42 of 50). These show a “start” date of 2006, a “final” year of 2008, and an 8-year “payback” in year 2016. However, the BRAC COBRA Report does not include the Advisory and Assistance Services (A&AS) contractors authorized for utilization on the OSSW manning documents. A&AS positions provide services under contract by nongovernmental sources to support or improve successful performance of ongoing Federal operations (FAR 2.101). As such, these A&AS personnel needed to be included in the COBRA analysis, as they were included in some of the TJCSG data call questions, as well as the TJCSG Economic Impact Report, TECH-0042C: Air & Space C4ISR DAT&E Consolidation, page 4. Page 4 indicates that Hanscom AFB will gain 1412 A&AS Contractors in 2006. The cost of these Direct Contractors has not been included in the COBRA analysis.

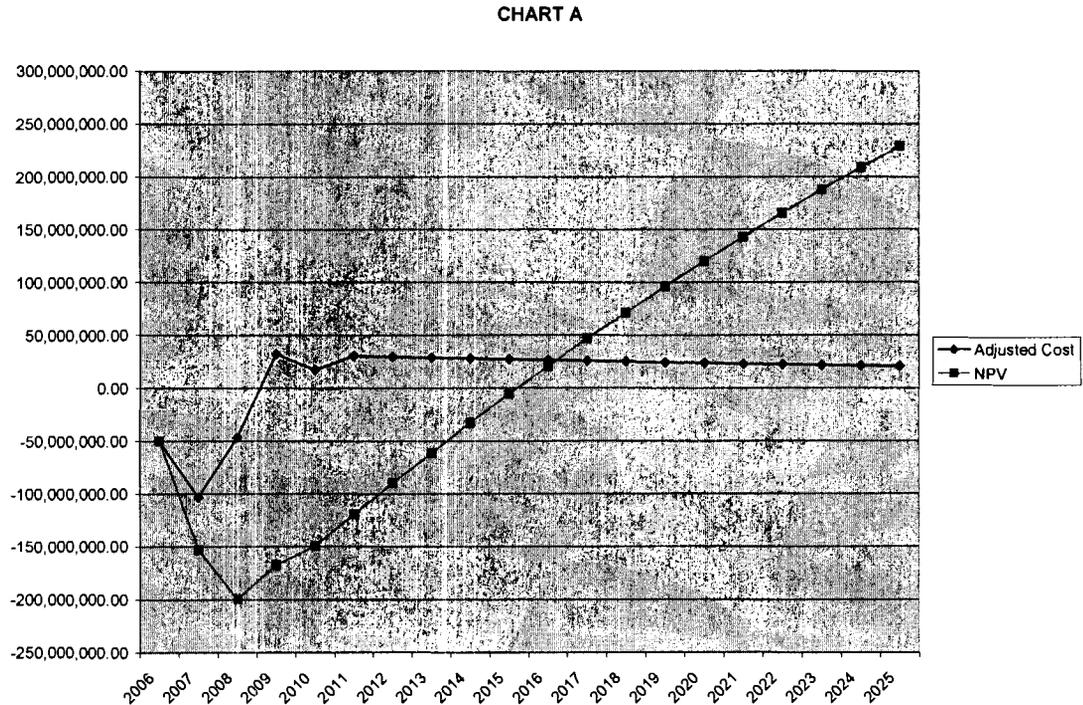
TABLE A

BRAC 05 "Net Present Value Report" (Baseline) There Were No Contractor Costs Factored into the COBRA Analysis.

Year	Cost	Factor	Adjusted Cost	NPV
2006	50,556,665	0.9862873	49,863,397	49,863,397
2007	107,518,433	0.9594234	103,155,701	153,019,097
2008	49,936,875	0.9332913	46,605,651	199,624,748
2009	-35,421,483	0.9078709	-32,158,134	167,466,615
2010	-19,949,483	0.8831429	-17,618,244	149,848,370
2011	-35,421,483	0.8590884	-30,430,185	119,418,185
2012	-35,421,483	0.8356891	-29,601,347	89,816,838
2013	-35,421,483	0.8129271	-28,795,083	61,021,754
2014	-35,421,483	0.7907851	-28,010,781	33,010,973
2015	-35,421,483	0.7692463	-27,247,845	5,763,129
2016	-35,421,483	0.748294	-26,505,683	-20,742,555
2017	-35,421,483	0.7279125	-25,783,740	-46,526,295

2018	-35,421,483	0.7080861	-25,081,460	-71,607,755
2019	-35,421,483	0.6887997	-24,398,307	-96,006,061
2020	-35,421,483	0.6700386	-23,733,761	-119,739,822
2021	-35,421,483	0.6517885	-23,087,315	-142,827,138
2022	-35,421,483	0.6340355	-22,458,478	-165,285,615
2023	-35,421,483	0.6167661	-21,846,770	-187,132,385
2024	-35,421,483	0.599967	-21,251,721	-208,384,106
2025	-35,421,483	0.5836255	-20,672,881	-229,056,987

**This Chart A (Below) reflects the BRAC Adjusted Cost/Saving and NPV.**



**Table B and Chart B with A&S Contractors included are explained below.**

**TABLE B**

BRAC 05 "Net Present Value Report" Adjusted to Include DFSG A&S Contractor Support Costs. These Costs Were Not Included in the COBRA Analysis.

Year	Cost	Factor	Adjusted Cost	NPV
2006	92,916,665	0.986287	91,642,527	91,642,527
2007	149,878,433	0.959423	143,796,876	235,439,402
2008	92,296,875	0.933291	86,139,870	321,579,273
2009	6,938,517	0.907871	6,299,278	327,878,551
2010	22,410,517	0.883143	19,791,689	347,670,240
2011	6,938,517	0.859088	5,960,799	353,631,039
2012	6,938,517	0.835689	5,798,443	359,429,482
2013	6,938,517	0.812927	5,640,509	365,069,991
2014	6,938,517	0.790785	5,486,876	370,556,866
2015	6,938,517	0.769246	5,337,429	375,894,295
2016	6,938,517	0.748294	5,192,051	381,086,346
2017	6,938,517	0.727913	5,050,633	386,136,979
2018	6,938,517	0.708086	4,913,067	391,050,046
2019	6,938,517	0.6888	4,779,248	395,829,295
2020	6,938,517	0.670039	4,649,074	400,478,369

2021	6,938,517	0.651789	4,522,446	405,000,814
2022	6,938,517	0.634036	4,399,266	409,400,081
2023	6,938,517	0.616766	4,279,442	413,679,523
2024	6,938,517	0.599967	4,162,881	417,842,404
2025	6,938,517	0.583626	4,049,495	421,891,899

CHART B

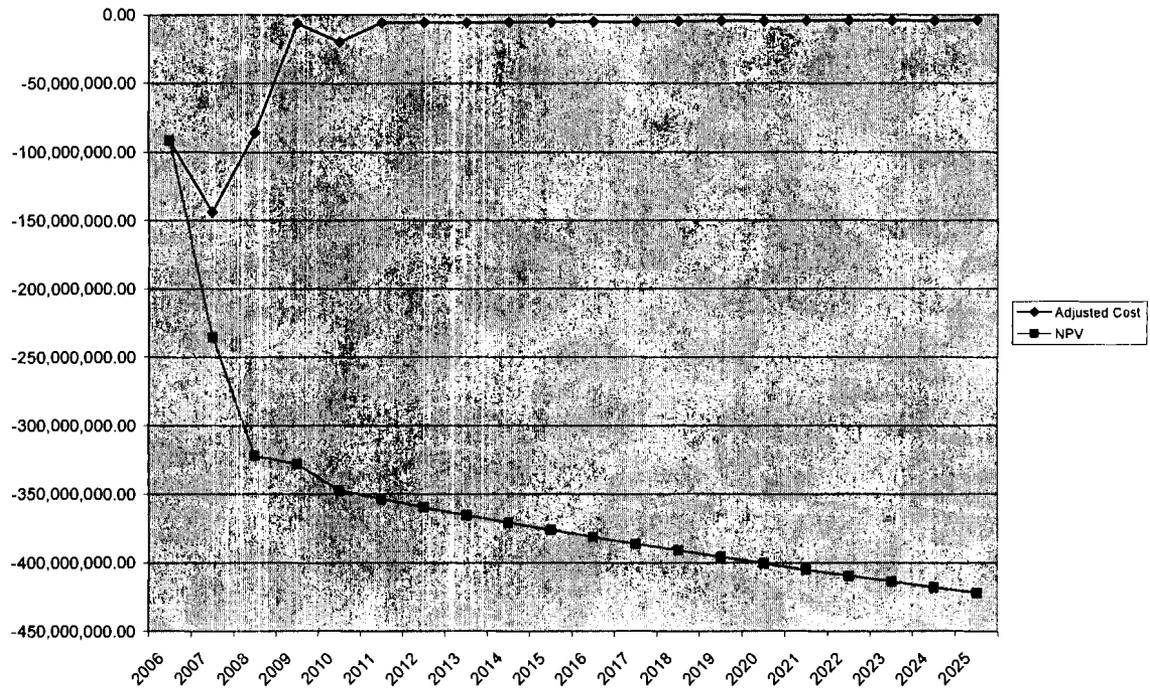


Table B and Chart B above, using the same formulae as in the TJCSG chart, includes the 1412 Direct Contractors required at Hanscom AFB for this scenario. Included in the “Cost” column of the chart is a conservative, additional cost of \$30,000 per contractor in Boston versus Dayton (\$100,000 per Direct Contractor in Dayton versus \$130,000 per Direct Contractor in Boston). (Department of Labor, Bureau of Labor Statistics - Computer and Mathematical Science Occupations average: Boston MSA average salary (\$76,870); Dayton Springfield MSA average salary (\$61,360) - Escalation Factor for cost of living in Boston 1.30; Government cost of an A&AS IT Contractor ~ \$100,000, applying the cost of living index of 130 to \$100,000 equals ~\$130,000 for the same IT A&AS Contractor in Boston). This additional cost per Direct Contractor amounts to \$42,360,000 additional cost per year in Boston to support the Hanscom AFB scenario (1412 Direct Contractors at an increased cost of \$30,000 each). In the year 2025, rather than the BRAC-reported saving of \$229 million dollars, there is a loss of \$421 million dollars – there will *never* be a savings.

TABLE C

BRAC 05 "Net Present Value Report" Adjusted to Include DFSG A&S and Development Contractor Support Costs. These Costs Were Not Included in the COBRA Analysis.

Year	Cost	Factor	Adjusted Cost	NPV
2006	133,176,665	0.9862873	131,350,453	131,350,453
2007	190,138,443	0.9594234	182,423,271	313,773,725
2008	132,556,875	0.9332913	123,714,178	437,487,903
2009	47,198,517	0.9078709	42,850,160	480,338,063
2010	62,670,517	0.8831429	55,347,022	535,685,085
2011	47,198,517	0.8590884	40,547,698	576,232,784
2012	47,198,517	0.8356891	39,443,286	615,676,070
2013	47,198,517	0.8129271	38,368,954	654,045,023
2014	47,198,517	0.7907851	37,323,884	691,368,907
2015	47,198,517	0.7692463	36,307,285	727,676,192
2016	47,198,517	0.748294	35,318,367	762,994,559
2017	47,198,517	0.7279125	34,356,391	797,350,950
2018	47,198,517	0.7080861	33,420,614	830,771,563
2019	47,198,517	0.6887997	32,510,324	863,281,888
2020	47,198,517	0.6700386	31,624,828	894,906,716
2021	47,198,517	0.6517885	30,763,451	925,670,167
2022	47,198,517	0.6340355	29,925,535	955,595,702
2023	47,198,517	0.6167661	29,110,445	984,706,147
2024	47,198,517	0.599967	28,317,553	1,013,023,700
2025	47,198,517	0.5836255	27,546,258	1,040,569,958

Table C above and Chart C below, using the same formulae as in the TJCSG chart, includes the 1412 Direct Contractors required at Hanscom AFB for this scenario, as well as 1342 development contractors that currently work for DFSG (the Dayton Region believes the number of actual development contractors is about 2000 to 2400). Included in the "Cost" column of the chart is a conservative additional cost of \$30,000 per contractor in Boston versus Dayton (\$100,000 per Direct Contractor in Dayton versus \$130,000 per Direct Contractor in Boston). (Department of Labor, Bureau of Labor Statistics - Computer and Mathematical Science Occupations average: Boston MSA average salary (\$76,870); Dayton Springfield MSA average salary (\$61,360) - Escalation Factor for cost of living in Boston 1.30; Government cost of an A&S IT and Development Contractor ~ \$100,000, applying the cost of living index of 130 to \$100,000 equals ~\$130,000 for the same IT A&S Contractor in Boston). This additional cost per Direct Contractor (A&S) and Development contractors, amounts to \$82,620,000 additional cost per year in Boston to support the Hanscom AFB scenario (2754 Total Contractors [1412 A&S and 1342 Development Contractors] at an increased cost of \$30,000 each). In the year 2025, rather than the BRAC-reported saving of \$229 million dollars, there is a *loss of \$1.0 billion dollars* – there will *never* be a savings! Additionally, the creation of Hanscom as a "Center of Excellence" for potential "Joint" growth in the future is not feasible due to high costs in the Boston area and the lack of available land to expand.

**CHART C**

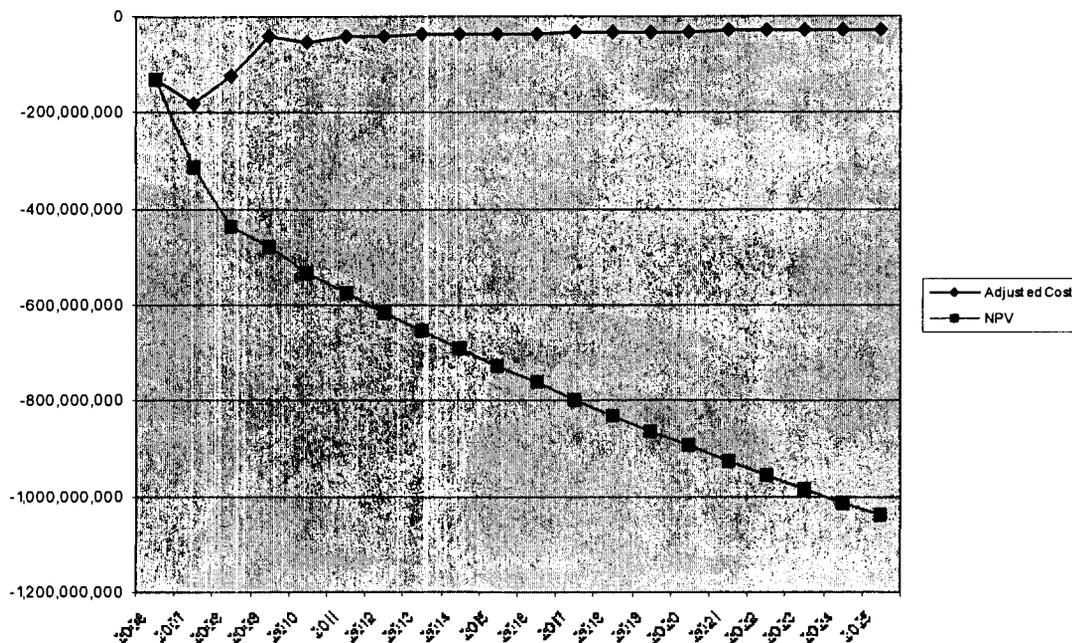


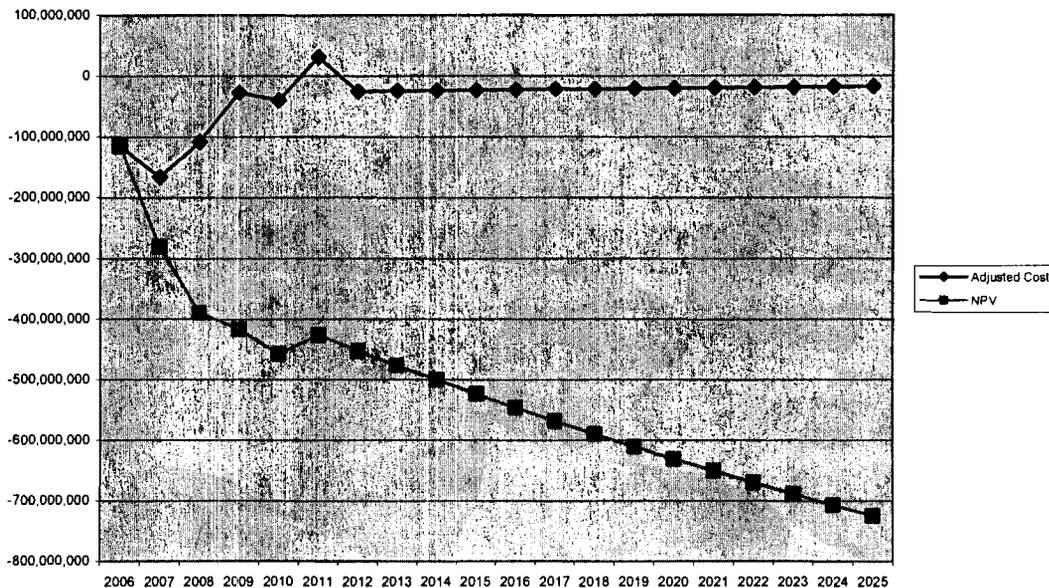
Table D and Chart D below represent recent data from the Air Force regarding the DFSG military and civilian personnel, and include the DFSG A&AS contractors as well as the Development contractors associated with DFSG’s mission. The new data indicate that the additional costs (based on tables 1 to 3 below) per contractor is \$23,874 versus our first estimate of \$30,000. In any case, the NPV for Chart D shows a cost of over \$700 million dollars in 2025, and there will never be a savings to this scenario.

**TABLE D**

Year	Cost	Factor	Adjusted Cost	NPV
2006	116,306,641	0.986287	114,711,763	114,711,763
2007	173,268,109	0.959423	166,237,478	280,949,241
2008	115,686,551	0.933291	107,969,252	388,918,493
2009	30,328,193	0.907871	27,534,084	416,452,577
2010	45,800,193	0.883143	40,448,115	456,900,692
2011	-35,421,483	0.859088	-30,430,185	426,470,507
2012	30,328,193	0.835689	25,344,940	451,815,447
2013	30,328,193	0.812927	24,654,610	476,470,057
2014	30,328,193	0.790785	23,983,083	500,453,140
2015	30,328,193	0.769246	23,329,850	523,782,990
2016	30,328,193	0.748294	22,694,405	546,477,395
2017	30,328,193	0.727913	22,076,271	568,553,666
2018	30,328,193	0.708086	21,474,972	590,028,638
2019	30,328,193	0.6888	20,890,050	610,918,688
2020	30,328,193	0.670039	20,321,060	631,239,748
2021	30,328,193	0.651789	19,767,567	651,007,316

2022	30,328,193	0.634036	19,229,151	670,236,467
2023	30,328,193	0.616766	18,705,401	688,941,868
2024	30,328,193	0.599967	18,195,915	707,137,783
2025	30,328,193	0.583626	17,700,307	724,838,090

CHART D



4. The DFSG is deeply involved with **Commercial-Off-The-Shelf (COTS)** software solutions from private industry. Since the private industry has had the lead in developing software solutions, it has been in the best interest of the DoD to capitalize on proven software that is adaptable to DoD like functions. The current private industry technology solution is Enterprise Resource Planning (ERP). According to **Gartner Research Publications**, ERP implementations are **risky endeavors** and users must take control of their own destinies. Gartner Dataquest surveyed 265 U.S.-based IT and business managers. Gartner lists six critical success factors for implementing ERP. One of the success factors is that the functional managers must be involved and set realistic expectations and then manage them throughout the implementation process as the project conditions evolve. **Another factor for success is to focus on the users.** Inclusion of users in all activities is important along with having top management involvement and support in the whole project. Gartner recommends that External Service Providers (ESPs) should work with the client/end users. End users must have an ongoing involvement with the initiative. The DFSG is the ESP for AFMC functional users and their managers. **It is critically important to the success of the implementation process to have them collocated at AFMC (final criteria 1 and 4).** (Source: Gartner Research Publication Dates: 10 September 2002 ID Number TG-15-4868; 7 September 2004 ID Number G00122936; 10 December 2003 ID Number ITSV-WW-EX-0390, 23 September 2002 ID Number SPA-17-7897).

5. **The Selection Criteria used for the C4ISR grouped missions do not adequately measure the military value of the Acquisition, Development and Fielding mission of the DFSG.** As noted earlier, the COBRA analysis did not include all the direct positions annotated on the Unit Manning Document (UMD). Specifically, the A&AS contractors assigned to the DFSG to perform job descriptions that would otherwise be performed by authorized military or civilian personnel were excluded from the COBRA analysis. This represents a substantial and critical deviation from the approved selection criteria. However, in the ESC/OSSW organization chart, dated 7 December 2004, presented by the ESC OSSG Director in a briefing in an Air Force Information Technology day (See attachment 1) the Total DFSG manpower included 142 Military, 606 Civilian, and 715 A&AS Contractors, for a total of 1462 employees in the DFSG. The 715 A&AS Contractors are on the UMD and are part of the DFSG organization. They are omitted in the COBRA calculations and represent 49% of the direct personnel effort to accomplish the DFSG mission.
  
6. Also, in the BRAC Economic Impact Data for TECH-0042C: Air & Space C4ISR DAT&E Consolidation, page 6, the data show 864 Direct Contractor reduction for DFSG, and on page 4 the data reflects a gain of 1412 Direct Contractors for Hanscom AFB. The COBRA data does not reflect this significant direct contractor increase in the cost of moving DFSG or OSSG to Hanscom. The cost of A&AS contractor support in the Boston area will be significantly more costly than in the Dayton, Ohio.
  
7. Compounding the unrealistic expectation of accomplishing this realignment is the assumption that 55% of the civilians will move. **Historically, less than 20% of the people will actually move**, especially to such a high cost of living areas as Boston. It should also be noted that many civilians in DFSG are retired military and will not move with the position. Additionally, a doubtful expectation exists that Hanscom AFB can hire 189 qualified (the correct figure may be closer to over 250 civilian positions and over 500 direct contractor positions) civilians in the Boston area that are needed to fill the DFSG authorizations (page 48 TECH-0042 COBRA Analysis). Adding to the difficulty of the task will be the Boston area contracting firms trying to hire the same individuals to fill their contractor ranks to compete for the direct contractor support to DFSG at Hanscom. The Dayton area currently supplies the required contractor talent. Many of the personnel in the contractor pool of personnel have the knowledge, skills and abilities required to perform DFSG's mission due to the many military and civilian retirees in the Dayton area who previously worked for the Air Force and at WPAFB as civilian or military employees. This intellectual capital will be more expensive in the Boston area. This may be one of the reasons why the DFSG personnel numbers were reduced for realignment to Hanscom (28% reduction in personnel). The "proximity to the customer" in the TJCSG selection criteria under "synergy"

was not a major factor in C4IRS but it is critical for DFSG mission accomplishment (Source: TJCSG Analysis and Recommendations (Volume XII, 19 May 2005, Part V. Appendix B, page B-10).

8. It has taken many years to develop the contractor network in the Dayton area that supports DFSG. The Greater Dayton IT Alliance has compiled data to illustrate the depth of Information Technology personnel available within the Dayton/Springfield MSA. Six Standard Occupational Classifications (SOC) exits in the MSA and range from Computer & Information Systems Managers, Engineering Managers, Computer hardware Engineers, to Computer Operators and Computer Control Programmers & Operators. The Ohio Department of Jobs & Family Services identifies a total in all IT related SOCs in the Dayton/Springfield MSA of 16,810 personnel employed in the IT area. The ODJFS projects that by 2010 the total will be 22,440. The U.S. Department of Labor Bureau of Labor Statistics shows the Dayton MSA with an IT employment of 14,290 in 2002.
9. The larger Enterprise Resource Planning (ERP) capabilities desired by the Air Force as well as DoD are now beginning to reap the rewards of the DFSG's leadership and capability it has established. The other services have invested large amounts of money in enterprise applications with limited success because they failed to properly address the development issues and risks. The Defense Department's recommendation to move DFSG to Hanscom has not considered the differences required for Commercial-Off-The-Shelf (COTS) Business Management Information Technology (BMIT) acquisition. Hanscom's competencies are in the area of Command and Control (C2)...not BMIT.
10. The Department of Defense does not perform IT Research and Development on Business Management (Operations Support) Systems. DoD's announced policy for its Business Management Modernization Program (Air Force identifies it as Operational Support Modernization Program) is to acquire Commercial-Off-The-Shelf (COTS), specifically Enterprise Resource Planning, solutions. Therefore combining DFSG within the C4ISR mission group with selection criteria that measures R&D-type performance with the ultimate goal of producing a product is substantially flawed. The TJCSG measures do not account for the skills and abilities required to produce the services performed by the DFSG. DFSG provides acquisition services to AFMC functional users in Financial, contracting, and Logistics areas who then, enabled by the business (i.e., operational support) systems, provide capability to the war fighter. Geographical separation of the acquisition service provider (DFSG) from the functional users and managers at Headquarters AFMC injects significant risk of acquisition program failure and increased costs. This collocation of the service provider (DFSG) to its users and system managers (located at Wright-Patt AFB) is a major critical element in the success or failure of development and fielding according to both

government auditors and private industry research publications. (Source: Gartner Research & GAO-05-381, April 29, 2005; GAO-05-723T, June 8, 2005).

11. DFSG provides acquisition services to AFMC functional users, who then, enabled by the business (i.e., operational support) systems, provide capability to the warfighter. Geographical separation of the acquisition service provider (DFSG) from the functional users and managers at Headquarters AFMC injects significant risk of acquisition program failure and increased costs. This collocation of the service provider (DFSG) with its users and system managers (located at Wright-Patterson AFB) is a major critical element in the success or failure of development and fielding according to both government auditors and private industry research publications (Military Value Criteria). (Source: Gartner Research & GAO-05-381, April 29, 2005; GAO-05-723T, June 8, 2005)
12. The Department of Defense does not perform IT Research and Development on Business Management (Operations Support) Systems acquired and used by DFSG. DoD's announced policy for its Business Management Modernization Program (Air Force identifies it as Operational Support Modernization Program) is to acquire Commercial-Off-The-Shelf (COTS), specifically Enterprise Resource Planning, solutions (final criteria 1 and 4)
13. The inclusion of a business systems acquisition organization like DFSG in the broad C4ISR category was inappropriate, misleading and substantially deviates from final criteria 1. Most of the work conducted at Hanscom AFB relates to developing and acquiring C4ISR systems and subsystems rapidly produced as weapons systems for the warfighter. DFSG does not develop and acquire C4ISR systems and subsystems. DFSG is an organization focused on acquiring COTS computer software, assisting its functional customers with business process reengineering, evaluating the functionality of commercial-off-the-shelf business management solutions like Enterprise Resource Planning, managing requirements put in Requests For Proposals, and managing the acquisition and fielding of business management (also known as operational support systems) for the Air Force and DoD.
14. Sufficient land for Military Construction Programs is not available at Hanscom AFB (final criteria 1, 2, 3, 4 and 8). "Roughly 40 acres" are required. "Hanscom reported its largest parcel is 18.27 acres, and only 8.4 unconstrained acres are zoned for industrial ops." (Source: Summary of Scenario Environmental Impacts – Criterion 8, Technical Joint Cross Service Group, Consolidate Air and Space C4ISR Research, Development and Acquisition, Test and Evaluation).

### **Bottom line**

The Dayton Region Recommends that the 1462 DFSG personnel remain at WPAFB, collocated with their primary systems users and managers (**final criteria 1 and 4**), providing the best support to the DFSG customer, reduced risk of failure, availability of land and facilities to accommodate further anticipated joint growth (**final criteria 2**), reduced cost of operations (**final criteria 4**), and preservation of the intellectual capital already in place in the Dayton Region.

## **2005 BRAC Process TECH-0042 Part 7**

### **C4ISR RDAT&E Consolidation: Disconnects & Inconsistencies**

#### **Highlight of Findings**

- Bottom Line...Dayton-Springfield MSA Economic Impact/Job Loss Significantly Understated
- Increases AF Infrastructure - - Payback Calculation in Error
- Cost Understated
- Savings Overstated
  
- TJCSG Military Value (MV) for C4ISR D&A Calculation in Error
  1. WPAFB higher in almost every MV category except D&A for Information Systems
  2. Double Counting/Co-mingling of Hanscom and Maxwell Data.
    - **Question 04289: Identifies IMDS and DCAPES as a Hanscom AFB program; however, both are at Maxwell AFB, AL**
    - **Analysis provided to Commission different than AF Implementation Plan**
    - **Actual Plan Includes Realignment of 3 Additional AF Installations**
      - Hill AFB, UT; Tinker AFB, OK; Randolph AFB, TX
    - **Actual Plan Does not Have a Supporting COBRA Run**
    - **Actual Plan Includes Use of Lease Space Until MILCON is ready for occupancy (2008-2010)**
    - **Actual Plan includes Contracting out of 390 programming jobs currently at Maxwell AFB**
    - **Same approach may be used for Hill AFB, Tinker AFB, and Randolph AFB**
  
- TJCSG for C4ISR
  
- Did Not Apply 2025 Force Structure Plan for data and analysis
- Did Not Apply equal analyses for each site

- No COBRA runs for realignment of D&A Business Information Systems Workload at
  - Wright-Patterson AFB, OH
  - Maxwell AFB, AL
  - Hill AFB, UT
  - Tinker AFB, OK
  - Lackland AFB, TX
  - Randolph AFB, TX
- Inclusion of Business Information Systems inconsistent with C4ISR definition and application of Technical Criteria as indicated in BRAC documents.

### **Military Value (MV) Discussion**

- Military Value is the predominate decision criteria for the movement of the development and acquisition workload for movement to Hanscom AFB
- TJCSG Military Value (MV) Score for C4ISR Development & Acquisition Calculation in Error
  - WPAFB higher in almost every MV category except D&A for Information Systems
  - Double Counting/Co-mingling of Hanscom and Maxwell Data.
    - Question 04289: Identifies IMDS and DCAPES as an Hanscom AFB program; however, both are at Maxwell AFB, AL
- TJCSG “information systems” data qualifier for questions related to D&A workload
  - Counts all workload at Hanscom AFB which is predominately C2ISR yet,
  - Does not recognize C2ISR Information Systems Workload at ASC and AFRL on Wright-Patterson AFB or
  - Development and Acquisition Workload at ASC and AFRL on Wright-Patterson AFB
    - Predominately, the DFSG acquisition and engineering workforce was recruited from
      - Aeronautical Systems Center, Wright-Patterson AFB
      - HQ AFMC, Wright-Patterson AFB
      - Air Force Research Laboratory, Wright-Patterson AFB
      - DFSG has current MOAs in place for cross-training and utilization of personnel
- MV of WPAFB is higher than Hanscom AFB
- Only two exclusions found: Battlespace and C4ISR D&A
  - MV for C4ISR T&E delta not statistically significant

### **C4ISR Vs. Business Systems WPAFB Workload Misclassified**

C4ISR Joint Technical Architecture Definition, Systems that:

- Support properly designated commanders in the exercise of authority and direction over assigned and attached forces across the range of military operations;
- Collect, process, integrate, analyze, evaluate, or interpret available information concerning foreign countries or areas;
- Systematically observe aerospace, surface or subsurface areas, places, persons, or things by visual, aural, electronic, photographic, or other means; and
- Obtain, by visual observation or other detection methods, information about the activities and resources of an enemy or potential enemy, or secure data concerning the meteorological, hydrographic, or geographic characteristics of a particular area.

### **Business Systems: 21 Jun 2004 USD ATL Memo, Transformational Options:**

- 30. Examine DoD's business management operations to include the complex network of finance, logistics, personnel, acquisition, and other management processes and information systems that are used to gather the financial data needed to support day-to-day management and decision-making.
- 36. Review the efforts of the Business Management Modernization Program and all other information technology studies being conducted by OSD and the military departments with a goal of determining opportunities for transferring, consolidating, or privatizing all or part of information technology services and systems.
- Also directs use/look at other AF and OSD studies like MID 905

### **Analysis Disconnects**

#### USD AT&L Memo on 20-Year Force Structure Plan

- TJCSG C4ISR did not use
  - 20 year force structure plan for 2005 to 2025
  - Probable end-strength levels
- IMPACT: Costs and Savings are Incorrectly stated showing a personnel elimination savings of over 200 positions
- Note: As stated in the Jul 05 GAO report. Savings appear to be over stated.
  - Wrong Baseline Used
  - Planned Personnel Reductions (MID905, Work Force Shaping) included as savings.
  - Historically, AFMC funds civilian payroll at approximately 96%
    - Therefore, all savings with AFMC civilian personnel is overstated by 4%

### **DoD BRAC Technical JCSG Report Misleading**

- DoD BRAC Report - - “This recommendation will reduce the number of C4ISR technical facilities from 6 to 2.”
  - Edwards
  - Eglin AFB
  - Hanscom AFB
  - Wright-Patterson AFB
  - Maxwell AFB
  - Lackland AFB
  
  - Factual Error:
    - TJCSG Source documentation does not list Wright-Patterson or Maxwell as technical facilities
  
- TJCSG exempted 17 locations were from consideration ... with less than 31 full time equivalent work years ... military judgment of the TJCSG that the benefit to be derived from consideration of those facilities was far outweighed by the cost of that analysis.
  
- 3 AF Locations with 30 or more personnel were not addressed by the report: Hill AFB, Tinker AFB, Randolph AFB

### **Factual Errors**

- The AF plans to realign three additional C4ISR activities that were not part of published recommendation or included in the analysis.
  - Hill AFB                      60 Civ, 3 Mil, 38 Embedded Contractors
  - Tinker AFB                    57 Civ, 0 Mil, 25 Embedded Contractors
  - Randolph AFB                77 Civ, 13 Mil, 183 Embedded Contractors
  
  - No COBRA Accomplished
  
  - No Published Military Value Analysis for D&A for Hill or Randolph
  
  - ESC Submitted the data but it was not incorporated in the COBRAs published.

### **One-Time Costs Understated**

- GCSS Instance Replication
  - 2 Sites \$ ???M
  - Location of Second Site
  - Single Instance has Contingency Operations Plan Implications
  
- Productivity Loss (Allowed in Previous BRAC COBRAs)

### **Overhires and Contractors to fill the gap**

- COBRA \$0                      | SATAF        \$2.5M

- Interim Production Support (Allowed in Previous BRAC COBRAs)

**Cost to Maintain Dual Capability to mitigate Customer Risk**

- COBRA \$0 | SATAF \$7.5M
- ESC Leased Space Costs not included
- COBRA % of Civilian that will relocate 75%
- SATAF % Of Civilians that will not relocate 95%

**Actual Estimate Based on “Unofficial” Employee Feedback**

**Cost of Living Delta**

- Hanscom Area 38% More Expense
- Net Change in Disposable Income – \$22K.

**% Retirement Eligible (Optional+Early) 57.5%**

**Local Employment Options: AFRL, ASC, HQ AFMC**

- Unemployment Compensation

**COBRA: \$272 for 16 Weeks**

**State of Ohio: \$425 for 26 to 39 Weeks**

- Training for Civilian New Hires at Hanscom (Allowed in Previous BRACs)

**COBRA \$0**

**SATAF \$3K Per Person**

**Recurring Costs Understated**

Cost of Doing Business

**Embedded Contractors**

- Delta between Contractor cost at WPAFB and Hanscom AFB
  - \$9.7M annually
- Direct development contractor cost impact -- TBD

**Customer Interaction due to location changes \$2.6M annually**

- TDY, Air Fare, Care Rental
- Avg \$3K per trip X 2 trips annually for 50% of workforce

### **ESC Assumption 390 Maxwell Positions will be contracted out**

- Conservatively Increase of \$4.7M annually
- Was not in BRAC original proposal

### **227K square feet of space Identified at WPAFB for deactivation**

- 88th ABW is not going to deactivate the space
- Therefore Recurring BOS Cost are understated and Savings are overstated
- BOS Savings Appear to be inconsistent
  - 50% Increase in Hanscom Population only increases BOS 24%
  - 50% Increase in Hanscom Population only increases Sustainment 12%

### **MILCON Issues**

- What is the Beneficial Occupancy Date of the Facility?
  - People are scheduled to move in FY06 – FY08
  - Parking Lot Funded in FY08
  - Hanscom Infrastructure Upgrade Funded in FY08
  - Systems Furniture/Facility Outfitting Funded in FY10
- ESC Plan to Lease Space Until Facility Completed
  - In Direct Conflict of BRAC Goal for reduction in DoD Leased Space
  - Expense not included in the Analysis
- Facility Description Types in Hanscom CE Estimate do not match Types in Final BRAC Provided to the Commission

### **Economic Impact to Dayton-Springfield MSA**

- BRAC Report: Job Loss 2,250 Unemployment .44%
- SATAF Analysis: Job Loss 6,241 Unemployment 1.22%
  - Based on WPAFB EIC Multipliers

#### **Current WPAFB Jobs Baseline – 1111 Jobs**

- Military – 55
- Civilian – 429
- Support Contractors- 627

#### **Current Indirect Jobs – 1681**

- Indirect Jobs from Military - 23
- Indirect Jobs from Civilians - 674
- Indirect Jobs from Support Contractors – 984

Development Contractors (Estimated) – 1342  
Indirect Jobs from Development Contractors – 2107

Total Dayton Area Jobs – 6241

**Bottom Line:**

- DFSG & OSSG Missions **DO NOT** come under C4ISR at Hanscom
- There is **no reason** to consolidate **NON-C4ISR** organizations at Hanscom
- There will **NEVER** be a cost savings by realigning DFSG and OSSG to Hanscom
- Realignment of DFSG & OSSG to Hanscom puts both mission in **high risk**
- Hanscom has **little acreage to expand** with potential future joint consolidations
- Tremendous **cost avoidance** can be realized by **realigning OSSW** from Hanscom to WPAFB (~\$131Million in MCP and \$42 Million annually in reduced contractor costs)

**Recommend that OSSW be realigned from Hanscom AFB to WPAFB**

**WPAFB/DFSG/OSSG Missions Versus Hanscom C4ISR**  
**Mission**

	<b><u>DFSG/OSSG</u></b>
1. Mission Compatibility with Hanscom C4ISR	No
2. Available DFSG/OSSG-type Intellectual Capital at Hanscom	Unlikely
3. Knowledge of Legacy Systems/software at Hanscom area	Little, if any
4. Need for R&D for mission completion as C4ISR at Hanscom	None
5. Commercial-Off-The-Shelf (COTS) Software used	Yes
6. C4ISR Product end result as Hanscom	No
7. Product oriented like Hanscom	No
8. IT Acquisition and Sustainment orientation <i>unlike</i> Hanscom	Yes
9. Need to be collocated with customer <i>unlike</i> Hanscom	Yes
10. Risk of mission failure increased if moved to Hanscom	Yes
11. Need to be consolidated at Hanscom	No
12. <b>Increased Military Value</b> if DFSG left at WPAFB	Yes
13. Increased cost if moved to Hanscom	Yes

14.	Savings realized if moved to Hanscom	Never
15.	MCP Savings realized if OSSW moved to WPAFB	\$131M in MCP
16.	Yearly cost avoidance if OSSW moved to WPAFB	\$42M per year
17.	Need for Hanscom R&D Labs and Test & Evaluation	None
18.	Collocation with the Program Executive Officer important	Not critical
19.	Available Land for substantial further growth at WPAFB	Yes
20.	Available Land for substantial further growth at Hanscom	No
21.	Current DFSG contracts require work done within 25 mi.	Yes
22.	Available Direct & Development contractors at WPAFB	Yes

DoD BRAC Recommendation shows a 50% Increase in Hanscom Population with only an increases BOS of 24% only an increases Sustainment of 12%. This lack of increase suggests that COBRA Screen 5 was not adjusted upward when all the gains and losses at Hanscom were accomplished. In Military Construction costs, this omission could be as high as \$313Million.

**Business Systems, as described in the 21 Jun 2004 USD ATL Memo, Transformational Options is as follows:**

- 30. Examine DoD's business management operations to include the complex network of finance, logistics, personnel, acquisition, and other management processes and information systems that are used to gather the financial data needed to support day-to-day management and decision-making.
- 36. Review the efforts of the Business Management Modernization Program and all other information technology studies being conducted by OSD and the military departments with a goal of determining opportunities for transferring, consolidating, or privatizing all or part of information technology services and systems.

Using the above definition, coupled with an understanding of the DFSG and OSSG Business Systems missions, the inclusion of a business systems acquisition and sustainment organizations, such as DFSG and OSSG, in the broad C4ISR category was inappropriate, misleading and substantially deviates from final selection criteria 1.

Most of the work conducted at Hanscom AFB relates to developing and acquiring Command, Control, Communication, Computer, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems and subsystems (products) for rapid production as weapons systems for the warfighter. DFSG and OSSG do not research, develop and acquire C4ISR systems and subsystems.

DFSG is a service organization focused on *acquiring* COTS computer software, assisting its functional customers with business process reengineering, evaluating the functionality of commercial-off-the-shelf (COTS) business management solutions like Enterprise Resource Planning, managing requirements put in Requests For Proposals, and managing the

acquisition and fielding of business management (also known as operational support systems) for the Air Force and DoD. Critical to the success of this mission is maintaining close proximity to, and constant “face-to-face” communication with the functional customer.

The Department of Defense does not perform IT Research and Development on Business Management (Operations Support) Systems acquired and used by DFSG. DoD’s announced policy for its Business Management Modernization Program (Air Force identifies it as Operational Support Modernization Program) is to acquire Commercial-Off-The-Shelf (COTS), specifically Enterprise Resource Planning, solutions – this does not require the C4ISR R&D methodology (final criteria 1 and 4).

Inclusion of DFSG’s Business Information Systems mission is inconsistent with C4ISR definition and application of Technical Criteria as indicated in BRAC documents.

**Military Value is the predominate decision criteria for the movement of DFSG’s development and acquisition workload to Hanscom AFB. However, the TJCSG Military Value (MV) Score for C4ISR Development & Acquisition Calculation is in Error**

- WPAFB is higher in almost every MV category except D&A for Information Systems
- Double Counting/Co-mingling of Hanscom and Maxwell Data. Question 04289: Identifies two systems (IMDS and DCAPEs) as an Hanscom AFB program; however, both are at Maxwell AFB, AL.

**Statements below are taken from a 7 Dec 2004 briefing by ESC/OSSW/CC titled:  
Air Force Information Technology Day (NOT “C4ISR” Day)**

## **OSSW Mission Statement**

Develops, fields, sustains and tests worldwide communications-computer and force protection systems and capabilities for the President and Secretary of Defense, CJCS, unified combatant commanders, services, and specified DoD and non-DoD agencies to direct military forces. Designs, develops, and procures integrated systems. Responsible for life-cycle management of selected C4 and standard information and force protection systems valued at \$15 billion. Manages \$8.3 billion in contracts. Enhances weapon system readiness through the development and maintenance of information and force protection systems supporting the worldwide logistics, financial, contracting, business and security needs of the USAF and DoD. Leads the acquisition and support of systems valued in excess of \$1.7B dollars. Implements future standards and technologies as they mature. Responsible for the following programs: DEAMS (IAM); GCSS-AF (IAC); ECSS (eLog21); (ACAT TBD); ILSS (IAC); IMDS (IAC); DCAPEs (III); MilPDS (III), FPASS (III); Plus ~250

development and legacy C2&CS and Force Protection programs (various ACATIII/non-ACAT levels).

**OSSG** - Develops, acquires and sustains quality standard info systems to support AF mission

-- Over 1700 Mil, Civ and Dir Contr., \$250M annual budget, over 100 info systems

**DFSG** - Acquires, develops, maintains, reengineers and provides technical services for info systems

-- 1463 Mil, Civ and Dir Contr., \$153M annual budget

**Engineering Integration Squadron** - Provides a variety of command and control and information systems services including infrastructure planning, engineering, program management, contracting, and specialized testing and analysis for electromagnetic compatibility and electromagnetic pulse protection. The only group in the Air Force that plans, engineers, installs, removes, and relocates communications and information systems worldwide. Provides integrated communications-computer systems and services during war and peacetime for the Air Force and specified DoD agencies.

-- 591 personnel (end goal down from ~2300), Total money handled ~\$150M

**Force Protection Systems Squadron** - Provides wide range of acquisition and sustainment services for information assurance, intelligence, info operations and force protection missions

-- More than 560 cleared personnel, \$75M annual budget

-- Strong NSA, AIA, AFWIC partnerships, 150,000 sq ft of SCIF facilities

**ESC Det 5**"Acquire support and maintain command and control capability for the space age warfighter"

Specifically, the Det 5 commander/staff provides the following (from the ND mission brief):

Acquisition Support, Infrastructure Support (Personnel/manpower, UCMJ actions, facilities management)

264 Mil & Civ, 30 MITRE, 91 TEMS

Hanscom Local - ~3100 mil & civ (from ABW)

**GSUs** - ~3710 mil & civ

Total ~6810

### **Bottom Line:**

- DFSG & OSSG Missions **DO NOT** come under C4ISR at Hanscom
- There is **no reason** to consolidate **NON-C4ISR** organizations at Hanscom
- There will **NEVER** be a cost savings by realigning DFSG and OSSG to Hanscom

- Tremendous **cost avoidance** can be realized by realigning OSSW from Hanscom to WPAFB (~\$131Million in MCP and \$42 Million annually in reduced contractor costs)

### **Why Move OSSG and DFSG to Hanscom AFB?**

TJCSG Answer: For C4ISR RDATE&E, the TJCSG strove to address two of the biggest C4ISR concerns (Deleted “Gripes”) that come from the operational community.

- 1) the various systems delivered to the field don’t work well together (i.e., they don’t interoperate), and
- (2) The technology takes too long to get the field and thus is dated when it’s finally fielded.

Community Response: *Correct.* There is room for improvement in integration and speed of fielding of C4ISR systems. It is important to establish that DFSG and OSSG **do not** produce C4ISR systems; they develop and sustain automated business systems including COTS ERP solutions that produce data for inclusion in C4ISR Command and Control systems.

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TJCSG Answer: The root cause of these concerns is the multiple dispersed C4ISR RDATE&E activities.

Community Response: *Incorrect.* Delays and lack of interoperability can be the result of any failure during the development or integration of the components. The most likely point of failure is the integration level that could be the result of insufficient architectural standards that are not the responsibility of DFSG and OSSG. Dispersal of activities related to C4ISR RDATE&E activities is not a significant factor.

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TJCSG Answer: The natural tendency of geographically separate units (GSUs), such as OSSG and DFSG, is to pursue technical solutions that use local Information Technology (IT) assets and products with which they are familiar.

Community Response: *Incorrect.* This answer suggests that there is somehow an IT “culture” in Dayton that is inferior to the IT culture in Boston. Top IT specialists at both locations are trained at the same kind of schools and learn the same development tools. There is enormous fluidity and cross-interaction throughout the country of IT workers, perhaps more so than most major industries because of the volatility and constant advancement of the technology.<sup>1</sup>

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<sup>1</sup> The absurdity of this argument can be noted in the recent selection by Hewlett-Packard of NCR President Mark Hurd as HP President. The fact that Hurd spent virtually his entire career in Dayton working for NCR in no way suggested to the HP hiring team that he only knew Dayton-style IT. While

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TJCSG Answer: This can lead to unique, not readily interoperable IT solutions that do not reflect the state-of-the-art especially when the GSUs are located in places of lesser (Deleted “Relatively low”) IT intellectual capital.

Community Response: *Incorrect.* Problems with the development of C4ISR and automated business systems are not the consequence of developing those systems in a place of “lesser” IT intellectual capital. Moreover, the Dayton area has a robust IT community with hundreds of highly competitive IT-related business and major university IT programs. The intellectual capital at Wright-Patterson and Gunter AFB is as knowledgeable, if not more so, of current IT COTS technology as anywhere in the government and industry.

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TJCSG Answer: The result is that extra effort, manpower and time is required to integrate the C4ISR products from those two Support Groups with the C4ISR products from the remainder of the Operations Support Systems Wing and the other C4ISR Wings, all of which are located at Hanscom AFB.

Community Response: *Partially correct.* The requirement for extra resources to integrate automated business systems products with C4ISR is largely the result of inadequate architectural standards, which serve as the “instructions” to the two support groups. If the standards are not adequate, the products from the support groups will not integrate properly no matter how well the products are developed.

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TJCSG Answer: Similarly, co-locating the Air & Space C4ISR Research (currently at Wright-Patterson AFB) with the Development, Acquisition and Test & Evaluation (non-open air range) at Hanscom AFB is designed to reduce the cycle time required to field Information Systems technology and ease the integration of new technology into C4ISR products headed for the field.

Community Response: *Incorrect.* Air & Space C4ISR research has no direct relation to the work of DSFG, which is to acquire and develop business systems, nor with the work of OSSG. Consequently, co-locating Air & Space C4ISR research with DFSG and OSSG at Hanscom cannot be expected to have significant synergistic benefits. Consolidation of Air & Space C4ISR research at Hanscom may have research benefits but the benefits are not likely to affect the problems associated with integration of DFSG and C4ISR products.

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we consider this item to be preposterously arrogant we will stay focused on an objective and factual reply.

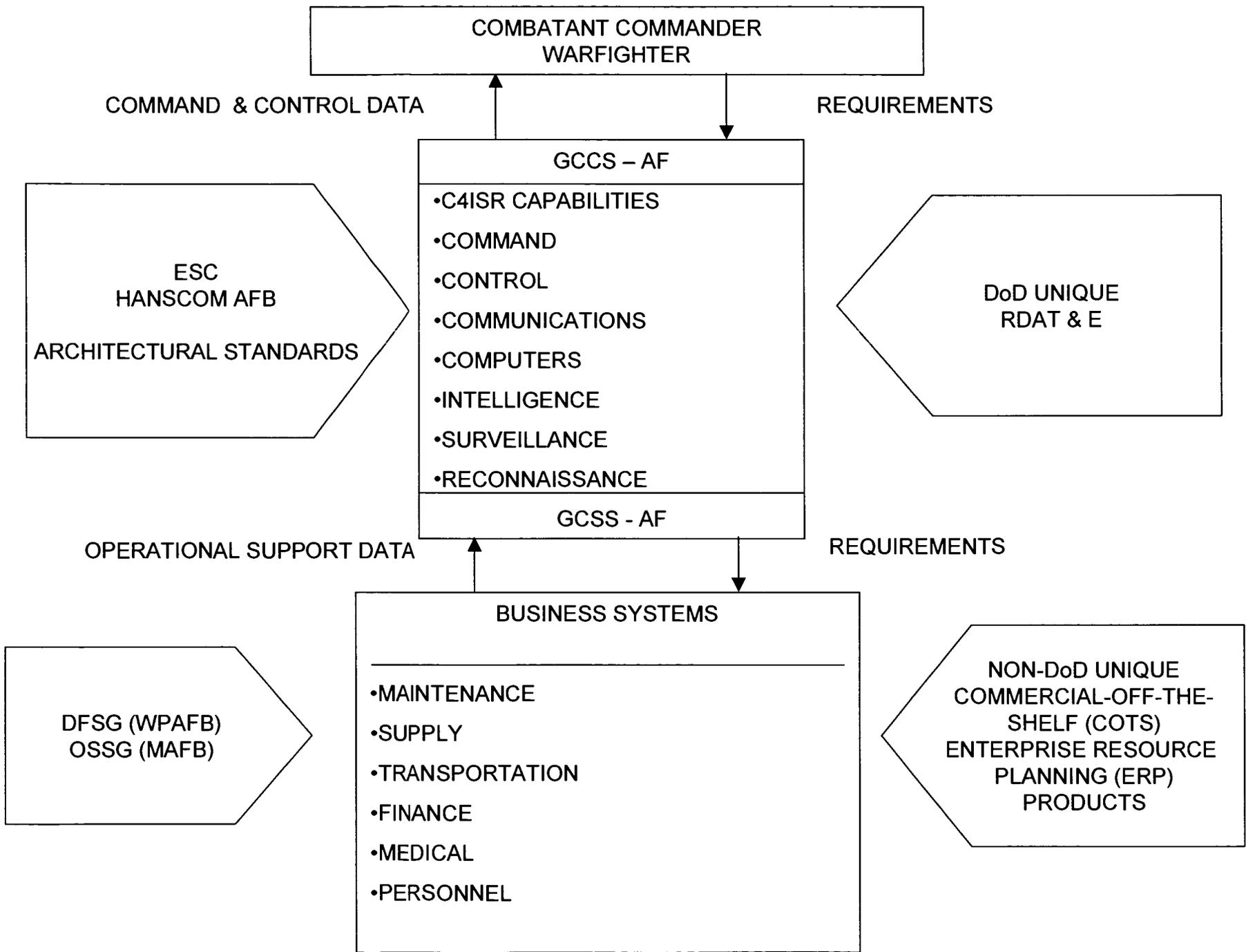
TJCSG Answer: With fewer seams in RDAT&E process, the SECDEF Recommendation to realign C4ISR RDAT&E to Hanscom AFB is consistent with the BRAC Criteria (i.e., Military Value) and should (Deleted “Will”), dramatically reduce the personnel, cycle time and effort required to deliver Air & Space C4ISR capability to the operational community.

Community Response: *Incorrect.* The relevant seam is not between DFSG / OSSG and the C4ISR work coordinated at Hanscom. Therefore, eliminating the geographical separation will not solve the problems. Moving DFSG to Hanscom will disrupt existing work and remove development from collocation with the principal customer (HQ AFMC), thus increasing risk of failure. Moreover, by moving work from a relatively low cost labor market to a significantly more expensive labor market, additional cost-cutting pressures are likely to further hamper results. Consequently, the move of DFSG / OSSG will not reduce the personnel, cycle time, and effort required to deliver Air & Space C4ISR capability to the operational community and it should be rejected as a substantial deviation from BRAC military value criteria.

**"C4ISR" refers to systems that are part of the Command, Control, Communications, Computer, Intelligence, Surveillance, and Reconnaissance domain.**

**C4ISR is defined in the Joint Technical Architecture (now DoDAF) as those systems that:**

- Support properly designated commanders in the exercise of authority and direction over assigned and attached forces across the range of military operations;
- Move data that is critical to the conduct of military operations;
- Collect, process, integrate, analyze, evaluate, or interpret available information concerning foreign countries or areas;
- Systematically observe aerospace, surface or subsurface areas, places, persons, or things by visual, aural, electronic, photographic, or other means; and
- Obtain, by visual observation or other detection methods, information about the activities and resources of an enemy or potential enemy, or secure data concerning the meteorological, hydrographic, or geographic characteristics of a particular area.



## **Consolidate Air and Space C4ISR Research, Development & Acquisition, Test & Evaluation, TECH-0042C7 (Move Development and Fielding Systems Group from Wright-Patterson AFB to Hanscom AFB)**

*The Secretary of Defense's recommendation to move the Development and Fielding Systems Group (DFSG) from Wright-Patterson Air Force Base, Ohio, to Hanscom Air Force Base, Massachusetts, would disconnect the unit from its main customers and its contract support network, thus jeopardizing logistics support for warfighting commanders. Correcting flaws in the original cost estimates, the move will increase costs for the Air Force significantly and there will never be a return on investment. The recommendation was formulated using incomplete, inconsistent, and incorrect data, and has been tainted with potential violations of the base closure process. The move is based on a wrong assumption that geographically separate missions are the cause of problems in C4ISR products.*

### ***Significant Deviations from Criteria 1—Mission Capabilities***

- Separating DFSG from the headquarters of the Air Force Materiel Command and other customers co-located with DFSG at Wright-Patterson introduces new, substantial risk thus jeopardizing logistics support for warfighting commanders.
- Work will be disrupted by moving DFSG from the broad network of contractors and IT specialists that has taken years to establish in the Dayton region to support DFSG and its mission.
- The benefits of consolidation are overstated because DFSG develops business systems, not C4ISR products. Thus, this move represents a co-location, not a consolidation.
- The military value analysis for C4ISR contains errors in calculations, including double counting and co-mingling of data for Maxwell AFB and Hanscom AFB.
- The military value analysis provided to the base closure commission is different from the Air Force Implementation Plan;
- The Technical Joint Cross Service Group did not apply the 2025 Force Structure Plan for data and analysis and did not apply consistent analyses for affected sites.
- A review of the military analysis comparing Hanscom AFB and Wright-Patterson AFB shows that Wright-Patterson scored higher in every category of C4ISR, Information Systems Technology Research, and C2ISR, except C4ISR D&A, which cannot be explained. (In some cases, WPAFB scored as much as three times the value of Hanscom.)
- If efficiencies and synergies from co-location were the driving force behind this move, it would have been more reasonable and less costly for the Air Force to move the 20 Operations Support Systems Wing (OSSW) personnel at Hanscom to Wright-Patterson.

### ***Significant Deviations from Criteria 2—Availability and Condition of Land***

- According to the Defense Department, this move requires roughly 40 acres. However, Hanscom reported only 8.4 unconstrained acres zoned for industrial operations.<sup>1</sup>

### ***Significant Deviations from Criteria 4— Cost of Operations***

- The Defense Department's original COBRA run ignores the cost of moving 1,412 direct contractor support jobs (embedded contractors) from Dayton, Ohio; Montgomery, Alabama; and San Antonio, Texas, which would increase annual labor costs to the Defense Department by an estimated \$33.7 million.<sup>2</sup>
- The Defense Department's original COBRA run ignores the cost of moving 1,342 development contractor jobs from Dayton to Boston, which would increase annual labor costs an additional estimated \$28.9 million.<sup>3</sup>
- The Defense Department's original COBRA run ignores the cost of moving development contractor jobs from Montgomery, Alabama and San Antonio, Texas. (Costs have not been determined.)
- The Defense Department's original COBRA run probably understates Base Operating Support (BOS) at Hanscom because the population at Hanscom will increase by 50 percent but BOS increases only 24 percent.
- The Defense Department's original COBRA run probably understates sustainment at Hanscom because the population at Hanscom will increase by 50 percent but sustainment increases only 12 percent.
- The Defense Department's original COBRA does include an estimated \$4.7 million annually recurring cost for contracting out 390 positions at Maxwell AFB.
- The Defense Department's original COBRA does not include an estimated \$2.6 million annually recurring cost for maintaining working visits and communication with customers., including TDY, air fare, car rental.

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<sup>1</sup> Apparently, Hanscom has redesignated previously restricted land by offering to utilize recreational areas and parking lots, all of which are non-contiguous, disconnected and odd-shaped for construction.

<sup>2</sup> Figures are derived from certified and uncertified AF data and U.S. Department of Labor Bureau of Labor Statistics, March 2005.

<sup>3</sup> Figures are derived from certified and uncertified AF data and U.S. Department of Labor Bureau of Labor Statistics, March 2005

### ***Significant Deviations from Criteria 5—Potential Costs and Savings***

- The Air Force now estimates that the growth of the Hanscom communications infrastructure footprint may be \$30 million instead of \$9 million as originally estimated.
- The Defense Department's original COBRA does not include a one-time cost to move the Global Combat Support System (GCSS) processing center at Gunter AFB (costs unknown)
- The Defense Department's original COBRA does not include a one-time cost of an estimated \$2.5 million for overhires and contractors to compensate for productivity loss during the move.
- The Defense Department's original COBRA does include a one-time cost of an estimated \$7.5 million to maintain dual capability to mitigate risk to the customer.
- The Defense Department's original COBRA does not include a one-time cost for training new hires at Hanscom, estimated to be \$3,000 per person. The number of civilians that will relocate is estimated to be 75 percent, which is significantly overstated based on informal employee feedback.

### ***Significant Deviations from Criteria 6—Economic Impact***

- The original employment figures estimated job loss from this move in the Dayton-Springfield MSA was 2,250, without taking into consideration the loss of 3,449 direct and indirect jobs from development contractors.

### ***Other Factors***

- The Air Force has inadequately responded to claims that the process has not been influenced by a \$410 million offer by the Massachusetts Defense Technology Initiative for infrastructure improvements at Hanscom in return for bringing jobs to Massachusetts. Such influence would be a violation of Section 2903(c)(3)(B) of the Defense Base Closure and Realignment Act of 1990 (as amended), which states: "In considering military installations for closure or realignment, the Secretary may not take into account for any purpose any advance conversion planning undertaken by an affected community with respect to the anticipated closure or realignment of an installation."
- The Air Force has Force has refused to release updated information on the disconnects and inconsistencies associated with this move despite requests by members of the Congressional delegation and the base closure commission.

**Analysis of Job Movements and Costs Not Included in Original Scenario to Consolidate Air  
and Space C4ISR Research, Development & Acquisition, Test & Evaluation  
At Hanscom Air Force Base**

**Table 1**  
**Annually Recurring Increased Cost of Labor Resulting from Moving Direct Contractor<sup>1</sup> Jobs to Hanscom AFB**  
**Not Counted in the Defense Department COBRA Analysis<sup>2</sup>**  
**Consolidate Air and Space C4ISR Research, Development & Acquisition, Test & Evaluation**

1	2	3	4	5	6	7	8	9
Donor Area	Number of Direct Contractor Jobs Moving to Boston <sup>3</sup>	Annual Salary per Job at Donor Base <sup>4</sup>	Cost to Air Force per Job at Donor Base (Annual Salary plus Non-Wage Benefits) <sup>5</sup>	Total Cost to Air Force for Direct Contract Jobs at Donor Base	Annual Salary per Job Moved to the Boston Area <sup>6</sup>	Cost to Air Force per Job at Hanscom (Annual Salary plus Non-Wage Benefits) <sup>7</sup>	Total Cost to Air Force for Direct Contract Jobs at Hanscom	Total Annual Increased Cost to Air Force for Direct Contractor Jobs Moved to Boston
Dayton, OH	658	\$61,360	\$79,523	\$52,325,844	\$76,870	\$99,624	\$65,552,276	\$13,226,432
Montgomery, AL	698	\$55,650	\$72,122	\$50,341,435	\$76,870	\$99,624	\$69,537,217	\$19,195,782
San Antonio, TX	56	\$59,120	\$76,620	\$4,290,693	\$76,870	\$99,624	\$5,578,917	\$1,288,224
<b>Total</b>	<b>1,412</b>	<b>\$176,130</b>		<b>\$106,957,973</b>			<b>\$140,668,410</b>	<b>\$33,710,437</b>

<sup>1</sup> "Direct Contractor" jobs, also known as Assistant and Advisory Services (A&AS) jobs, are private sector jobs that perform on-base services in direct support of the operation of the government unit's mission.

<sup>2</sup> The COBRA analysis apparently did recognize pay differentials for civilian government workers.

<sup>3</sup> Certified Data. Source: "Economic Impact Report." BRAC Report Volume 12 (Technical) G - TECH-0042C Criterion 6 Report.

<sup>4</sup> These numbers are based on a July 12, 2005 Air Force briefing, "DSFG Orientation AFMC BRAC Site Survey Team," presented by the Development and Fielding Systems Group, which used the figure of \$61,360 per direct contractor job for the Dayton-Springfield area (page 23). This number corresponds to the mean annual wages estimates of the U.S. Department of Labor Bureau of Labor Statistics for the Dayton-Springfield, MSA Ohio for computer and mathematical occupations (Standard Occupational Classification 15-0000). The other figures are for the corresponding positions for Montgomery, Alabama MSA; and San Antonio, Texas. See May 2004 Metropolitan Area Occupational Employment and Wage Estimates, Standard Occupational Classification.

<sup>5</sup> Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employer Costs for Employee Compensation--March 2005." This study determined the national average for employee benefits is equal to 29.6 percent of base salary. This includes paid leave, supplemental pay, insurance, retirement and savings, legally required benefits (such as Social Security and Medicare) and other benefits. This number is determined by taking the base annual salary in the previous column and adding 29.6 percent.

<sup>6</sup> This number is taken from the same July 12, 2005 Air Force Briefing. This number corresponds to the mean annual wages estimates of the U.S. Department of Labor Bureau of Labor Statistics for Boston, Massachusetts-New Hampshire PMSA. See May 2004 Metropolitan Area Occupational Employment and Wage Estimates, for computer and mathematical occupations (Standard Occupational Classification 15-0000).

<sup>7</sup> Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employer Costs for Employee Compensation--March 2005." This study determined the national average for employee benefits is equal to 29.6 percent of base salary. This includes paid leave, supplemental pay, insurance, retirement and savings, legally required benefits (such as Social Security and Medicare) and other benefits. This number is determined by taking the base annual salary in the previous column and adding 29.6 percent.

**Table 2**  
**Annually Recurring Increased Cost of Labor Resulting from Moving Development Contractor<sup>1</sup> Jobs**  
**From Dayton, Ohio Area to Boston, Massachusetts Area**  
**Not Counted in the Defense Department COBRA Analysis<sup>2</sup>**  
**Consolidate Air and Space C4ISR Research, Development & Acquisition, Test & Evaluation**

	2	3	4	5	6	7	8
Number of Jobs in the Dayton area that would move to Boston <sup>3</sup>	Annual Salary per Development Contractor Job in Dayton <sup>4</sup>	Cost to Air Force per Job at Donor Base (Annual Salary plus Non-Wage Benefits) <sup>5</sup>	Total Cost to Air Force for Development Contractor Jobs in Dayton Area	Annual Salary per Development Contractor Job in Boston Area <sup>6</sup>	Cost to Air Force per Job in Boston Area (Annual Salary plus Non-Wage Benefits) <sup>7</sup>	Total Cost to Air Force for Development Contract Jobs in Boston Area	Total Increased Cost to Air Force <sup>8</sup>

<sup>1</sup> These are private jobs with employers who have contracts to perform development and Sustainment work for the Development and Fielding Systems Group (DFSG) headquartered at Wright-Patterson Air Force Base, outside Dayton, Ohio

<sup>2</sup> The COBRA analysis apparently did recognize pay differentials for civilian government workers.

<sup>3</sup> This figure is taken from page 23 of a July 12, 2005 Air Force briefing, "DSFG Orientation AFMC BRAC Site Survey Team," presented by the Development and Fielding Systems Group. The source is described as, "Estimates based on contract awards to community."

<sup>4</sup> This figure is taken from the same July 12, 2005 Air Force briefing. This number corresponds to the mean annual wages estimates of the U.S. Department of Labor Bureau of Labor Statistics for Dayton-Springfield, Ohio, MSA for the Standard Occupational Classification series 11-3021, Computer and information systems managers. See May 2004 Metropolitan Area Occupational Employment and Wage Estimates.

<sup>5</sup> Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employer Costs for Employee Compensation--March 2005." This study determined the national average for employee benefits is equal to 29.6 percent of base salary. This includes paid leave, supplemental pay, insurance, retirement and savings, legally required benefits (such as Social Security and Medicare) and other benefits. This number is determined by taking the base annual salary in the previous column and adding 29.6 percent.

<sup>6</sup> This figure is taken from the same July 12, 2005 Air Force briefing. This number corresponds to the mean annual wages estimates of the U.S. Department of Labor Bureau of Labor Statistics for Boston, Massachusetts-New Hampshire PMSA for the Standard Occupational Classification series 11-3021, Computer and information systems managers. See May 2004 Metropolitan Area Occupational Employment and Wage Estimates.

<sup>7</sup> Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employer Costs for Employee Compensation--March 2005." This study determined the national average for employee benefits is equal to 29.6 percent of base salary. This includes paid leave, supplemental pay, insurance, retirement and savings, legally required benefits (such as Social Security and Medicare) and other benefits. This number is determined by taking the base annual salary in the previous column and adding 29.6 percent.

<sup>8</sup> Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employer Costs for Employee Compensation--March 2005." This study determined the national average for employee benefits is equal to 29.6 percent of base salary. This includes paid leave, supplemental pay, insurance, retirement and savings, legally required benefits (such as Social Security and Medicare) and other benefits.

1342	\$90,450	\$117,223	\$157,313,534	\$107,070	\$138,763	\$186,219,570	\$28,906,036
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**Table 3**  
**Annually Recurring Increased Cost of Labor Resulting from Moving Identified<sup>1</sup>**  
**Contractor Jobs to Hanscom AFB**  
**Not Counted in the Defense Department COBRA Analysis**  
**Consolidate Air and Space C4ISR Research, Development & Acquisition, Test**  
**& Evaluation<sup>2</sup>**

Annually recurring increased labor costs for direct contractor jobs from Dayton, Ohio; Montgomery, Alabama, and San Antonio, Texas	\$33,710,437
Annually recurring increased labor costs for development contractor jobs from Dayton, Ohio	\$28,906,036
Total annually recurring costs	\$62,616,473

<sup>1</sup> "Identified" means only specific jobs identified by the Department of Defense. These are identified either in the Department of Defense documents provided as justification for BRAC decision or the July 12, 2005 Air Force briefing, "DSFG Orientation AFMC BRAC Site Survey Team," presented by the Development and Fielding Systems Group. This does not include development contractor jobs in Montgomery, Alabama, or San Antonio, Texas. According to the "Statement for the Record" provided by Brig. Gen. (ret.) Paul Hankins, Special Assistant, City of Montgomery and Montgomery Area Chamber of Commerce, to the Atlanta, Georgia hearing of the Defense Base Closure and Realignment Commission on June 30, 2005, there are a total of 940 contractors support the Operations and Sustainment Systems Group (OSSG) in Montgomery, Alabama. This is 242 more jobs than accounted for in the Defense Department's BRAC data. If this jobs were moved to the Boston area from Montgomery using the same formula of the DFSG jobs from Dayton, then it would add another \$8,408,747 in annually recurring labor costs. However, this figure is excluded from the chart because the number cannot be verified using only Defense Department data.

<sup>2</sup> See tables 1 and 2 for supporting data and sources.

**Table 4**  
**Comparisons of Defense Department Estimate**  
**Versus Inclusion of Increased Labor Costs**

	<i>Defense Department Estimate Without Increased Labor Costs</i>	<i>Defense Department Estimate With Increased Labor Costs</i>
Annually recurring savings after implementation	\$36.2 million	-\$26.4 million
Net of all costs and savings to the Department during the implementation period	\$115.3 million	-260.3 million



# Dayton Development Coalition

*A Partnership For Regional Growth*

August 11, 2005

The Honorable Anthony J. Principi  
Chairman  
2005 Defense Base Closure and Realignment Commission  
2521 South Clark Street, Suite 600  
Arlington, Virginia 22202

Dear Mr. Principi:

On behalf of the communities of Monterey, California, and Dayton, Ohio, we are writing to express our joint support for maintaining the Naval Postgraduate School (NPS) in Monterey, California, and the Air Force Institute of Technology (AFIT) on Wright-Patterson Air Force Base, Ohio. We both believe the two schools offer critical military value to the Department of Defense and to the Navy and Air Force, respectively. That value would be significantly compromised by closure or by consolidation through either of the two scenarios under consideration by the 2005 Defense Base Closure and Realignment Commission.

Both AFIT and NPS have distinguished histories of serving the graduate education needs of the Department of Defense. Both schools have outstanding facilities and faculty which could not be moved or duplicated easily. Both schools provide defense-focused education tailored to meet unique defense requirements and which is not offered by civilian institutions.

In recent years, NPS and AFIT have taken steps to reduce duplication and consolidate functions on a case-by-case basis to reduce costs and improve efficiency in the overall graduate education programs of the Department of Defense. We support this process and believe that a continued effort in this direction is the proper approach to achieve the improved military value, efficiencies, and cost reductions that the Commission seeks.

Thank you for your consideration of our views.

Sincerely,

Dan Albert  
Mayor  
City of Monterey

JP Nauseef  
President and CEO  
Dayton Development Coalition

## **Defense Finance and Accounting Service (DFAS) Columbus Fact Sheet**

### **Background**

- DFAS Columbus is one of 23 tenant organizations at the Defense Supply Center Columbus (DSCC)
- DFAS is organized around three business lines:
  - Military Pay
  - Commercial Pay (payment of defense contractors)
  - Accounting Services
- DFAS Columbus is the lead center for all Commercial Pay activities with multiple subordinate DFAS sites providing Vendor Pay (small defense contracts) services
  - Nearly half the DoD budget flows through Columbus each year—all major defense contracts are paid through Columbus
- The BRAC recommendation consolidates all Commercial/Vendor Pay services in Columbus (with some redundant capability in Indianapolis and Denver)
  - This consolidation makes perfect business sense since with modernized business information systems, Columbus can easily handle the workload of these smaller centers (Contractors don't know if they receive their check from a DFAS site across town or across the country) with fewer people and much less overhead
  - This consolidation achieves significant economies of scale while streamlining DFAS Commercial Pay services

### **DFAS Columbus and Defense Supply Center Columbus (DSCC)**

- DFAS Columbus is one of nine DFAS sites located on active duty military or DoD installations. All remaining DFAS sites are in leased GSA or Commercial facilities.
  - Of these nine DFAS sites, DFAS Columbus offers nearly 7 times more excess capacity for growth than its nearest competitor
  - Active duty installations normally offer significant economies of scale, much better security, and quality of life facilities not normally found in leased facilities—an important consideration in any consolidation option
- The primary reason why it makes sense to consolidate DFAS operations in Columbus are the many benefits of being a tenant organization at DSCC. DSCC is an ideal BRAC receiver location and offers all of its tenants:
- *Military Value:* DFAS Columbus' military value was rated # 7 out of 26 Centers by the DoD BRAC Joint Cross Service Working Group. However, DFAS Columbus' modern 1999 facility was erroneously rated "Red"—the lowest rating—by the Cross Service Working Group which resulted in zero points for Columbus. If the correct "Green Rating" had been assigned, Columbus would have rated # 2 in military value among all DFAS sites

- *Economic Value*
  - 87% of workforce resides in facilities built in past 15 years, 70% in facilities built in past decade
  - Modern, cost effective infrastructure that has been renovated or replaced over past five years: water, power, heating, air conditioning, and fiber optic cable systems
  - New Fire and Emergency response facilities
  - State-of-art Data Center—90,000 sq. ft. with 65,000 sq. ft of raised floors; redundant power supplies and communication lines to ensure facility always connected
  - Quality of life facilities; new child care center, BX, swimming pool, fitness center, golf course
  
- *Capacity for Immediate and Large Scale Growth*
  - DFAS Columbus was rated # 2 in excess capacity of all DFAS sites with 186,000 square feet. The next largest center is Kansas City with 48,000 square feet
  - DoD recommended approximately 1300 + personnel for realignment to Columbus. However, DSCC estimates that in fact there is capacity for 1650 personnel using the Joint Cross Service Group calculations for useable square footage. This now allows the BRAC commission to increase the Columbus realignment number if it is required to achieve BRAC objective savings and facilitate accomplishment of the DFAS mission
  - All expansion for DFAS Columbus can be accomplished with no MILCON required
  
- *Outstanding Installation Security*
  - DSCC meets all DoD security standards with more improvements to be added in FY 2006. Examples of this excellent security environment include:
    - High Grade woven cable perimeter fence to prevent vehicle penetration
    - Brand new dedicated Visitor Processing Center to keep visitor vehicles segregated from the main base until cleared
    - A Base-Wide, all weather motorized security camera system controlled by an new centralized security center
    - Emergency pop-up bollard systems to immediately halt suspect vehicles
    - A large truck gate with cameras to view vehicle undercarriage and roof areas for full security inspections

- The building where DFAS Columbus resides today, has all its windows reinforced in a special Mylar anti-fragmentation film to prevent glass from becoming airborne during an explosion—This is similar to what the Pentagon now has on its windows and represents one more important layer of protection for DFAS Columbus’ most important resource—its people.
- “*Jointness*”
  - There are 23 DoD and federal agencies at DSCC, including DFAS Columbus. No other DFAS site has a fraction of this many DoD agencies co-located on the same installation
  - For this round of BRAC, Jointness was a major DoD objective to be achieved as installations were closed or realigned. Therefore you would think that Jointness would be an important consideration when analyzing the military value of an organization whether it is the Army, Air Force, Navy or any DoD organization, like DFAS
  - For some unexplainable reason, the Joint Cross Service Working, whose very title emphasizes jointness, chose to ignore this major BRAC objective when assessing military value for any DFAS unit
  - Jointness for DFAS Columbus is a major advantage over other DFAS sites since it is co-located with multiple DoD organizations that have interrelated activities and who provide mutual support to each other on a wide range of mission related issues. Being co-located with DoD agencies such as the Defense Logistics Agency (DLA); the Defense Information Systems Agency and the Defense Contract Management Agency (DCMA) provides DFAS Columbus a tremendous operational resource to call upon daily and cannot be found at any other DFAS location.
  - In addition, the tenant organizations at DSCC, such as DFAS Columbus, share a variety of installation support costs. As you increase the size of DFAS Columbus and add new organizations as recommended by BRAC, it helps drive down these shared installation costs and keeps DSCC affordable for all tenant organizations including DFAS Columbus. In turn, this allows DFAS Columbus to provide quality service at affordable prices to its customers