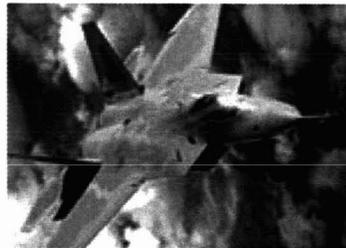
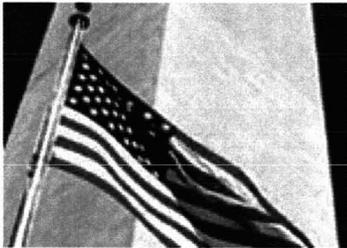




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Helping Our Clients Make Better Decisions



**MONTGOMERY CHAMBER OF COMMERCE
COBRA Model Analysis
Regarding
Operations and Sustainment Systems Group
Base Realignment and Closure Commission Recommendation**

20 July 2005



Summary of Previous Analysis

COBRA Model Excursions – Maxwell AFB, AL				
	Baseline DoD Scenario	Alternative 2 - Include Missing Contractor Data to Baseline Case	Alternative 3 - Move OSSG using Onboard Personnel and Contractor Personnel	Alternative 4 - Onboard Personnel plus RDT&E Portion of OSSG moves
Net Present Value	- \$229M	+\$119M	+\$413M	+\$98M
Payback Period	8 years	51 years	Never	48 years
Issues	Authorized versus onboard; No contractors included	Contractors 50% of the workforce	Working capital funding onboard versus authorized with no funds	Long time for payback
Impact	No real savings	Includes reality of contractors in the analysis	Cost plus mission degradation	Completes C4ISR COE alignment

- Major issues from initial review of the DOD COBRA
 - No data in the COBRA Model on contractor support and the associated costs
 - Approximately 940 contractors (approximately 50 percent of the OSSG workforce) working in Montgomery both on-site and off-site directly supporting the OSSG.
 - Preliminary review of contractor support costs by labor man-hour between the two geographic areas (Montgomery, AL, and Boston, MA) indicates at least a 30 to 35 percent increase in the cost for a man-hour of support
 - COBRA Model calls for Military Construction (MILCON) funds in FY06 and FY07
 - Based on statutory requirement to Congress of MILCON requests two years prior to execution and the fact that the FY06 budget is under Congressional review now, it appears the proposed realignment could not take place any earlier than FY09
 - OSSG is working capital funded vice mission funded
 - Authorized Military and Civilian end strength was taken as savings although already removed



New Information Since 23 June 2005

- Substantial savings from reductions of Military & Civilian workforce are probably not going to accrue
 - Reductions taken in DOD COBRA take 393 billets as savings
 - There is information that billets were intended to be outsourced as part of restructuring workforce for a “Most Efficient Organization”
 - Therefore authorizations are not available for savings
 - COBRA run adding this data including workforce additions required at both locations yielded following results
 - Data inputs
 - Used 393 end strength at \$100K as savings from Maxwell, took 10% efficiency reduction by moving to Hanscom, and used a 30% cost increase factor for contractors in MA
 - This was a change to Alt 3 (previously submitted) (MEO Adj)
 - **COBRA results are:**
 - **Payback Year: Never**
 - **NPV in 2025 (\$K): 470,747**
 - **1-Time Cost (\$K): 250,928**
 - General cost of living in Boston is 68% higher than in Montgomery
 - Contractor costs from previous alternative COBRA runs continues to be conservative



Summary & Conclusions

- As more information as become available the recommendation to move the OSSG from Maxwell to Hanscom continues to escalate in cost
- From an economic perspective the recommendation appears to be flawed because
 - Contractors were not considered
 - Outcome of the MEO was not fully understood

REPORT
FOR
MONTGOMERY CHAMBER OF COMMERCE
COBRA Model Analysis
Regarding
Operations and Sustainment Systems Group
Base Realignment and Closure Commission Recommendation



23 June 2005

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I. Executive Summary

Secretary of Defense Rumsfeld provided the Base Realignment and Closure (BRAC) Commission the *Department of Defense Base Closure and Realignment Report* on May 13, 2005. The report contained recommendations to align the United States base force structure with the force structure that is expected to be needed over the next 20 years. The report recommendations focus on implementing Department of Defense (DoD) global force reposturing, facilitate the ongoing transformation of United States military forces to meet the challenges of the 21st century and restructure important support functions to capitalize on advances in technology and business practices. The BRAC goals are to support United States military force transformation, address the new and emerging security challenges, promote jointness and achieve significant savings.

To accomplish the BRAC process, the DoD organized into two analysis groups: the Military Departments and Joint Cross-Service Groups (JCSGs). The Military Departments looked at installations specifically devoted to their individual requirements as well as supporting operational forces, while the JCSGs focused on bases and functions that represent DoD's common infrastructure.

One JCSG, the Technical Joint Cross-Service Group explored research, development, acquisition, test and evaluation (RDAT&E) functions across the Department of Defense. One of the Technical JCSG subgroups, Command, Control, Communications and Computers and Intelligence, Surveillance and Reconnaissance (C4ISR) provided a recommendation to create a C4ISR RDAT&E Center of Excellence at Hanscom AFB, MA, by realigning many units to include the Operations and Sustainment Systems Group (OSSG) located at Maxwell AFB, AL.

The subgroup based their recommendation on an evaluation of military value criteria, a review of scenarios to maximize military value and minimize capacity retained and a comparison against other considerations to include Payback Period, Environmental Factors, Community Infrastructure and Economic Impact.

The BRAC COBRA Model was then used to calculate the savings associated with this realignment of the OSSG. Upon examination of the COBRA Model data concerning the OSSG (referred to as the Baseline Case), Whitney, Bradley & Brown, Inc. (WBB) found numerous inconsistencies in the assumptions and data: military and civilian manpower numbers were inaccurate, contractor data was omitted and military construction to complete the realignment was overly optimistic.

Accordingly, WBB captured and evaluated these inconsistencies in alternative scenarios. Four significant alternative scenarios examined included:

- Alternative 1 – No realignment of the OSSG. WBB ran this alternative first, based on the fact that the OSSG mission is predominately operations and sustainment vice RDAT&E—the intent of the C4ISR RDAT&E Center of Excellence. The results of the COBRA Model indicated a Net Present Value of +\$159M (i.e., no savings) with a Payback Period of 100 years. The impact of this alternative is that without the realigning the OSSG, the BRAC recommendation to create a C4ISR RDAT&E Center of Excellence would not be realized
- Alternative 2 – Baseline Case, but included the Missing Contractor data. This excursion examined the DoD COBRA run as given (Baseline Case), but included the 940-contractor current OSSG workforce.

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In other words, accepting the DoD COBRA data and simply adding in the OSSG contractor workforce. The COBRA Model yielded a Net Present Value of +\$119 M (i.e., no savings) with a Payback Period of 51 years. In essence, this excursion adds the reality of the contractor workforce in the DoD COBRA calculations—with no savings realized

- Alternative 3 – Move the OSSG, but use the onboard or actual workforce (military, government civilian and contractor) located at Maxwell AFB, AL, today. The intent is to see the impact of moving the OSSG (in line with the BRAC recommendation) with the correct number of personnel. Using this information, the COBRA Model gave a Net Present Value of +\$413M (i.e., no savings) and there is not a Payback Period (i.e., the payback is never reached)
- Alternative 4 – Onboard personnel or the actual workforce (military, government civilian and contractor) located at Maxwell AFB, AL, today and move the RDT&E portion of the OSSG to Hanscom AFB, MA, in line with the intent of the BRAC recommendation to create a C4ISR RDT&E Center of Excellence. In this case, the COBRA Model calculated a Net Present Value of +\$.98M (i.e., no savings) and a Payback Period of 48 years

The results of these three last alternatives are summarized in the table below.

COBRA Model Excursions – Maxwell AFB, AL				
	Baseline DoD Scenario	Alternative 2 - Include Missing Contractor Data to Baseline Case	Alternative 3 - Move OSSG using Onboard Personnel and Contractor Personnel	Alternative 4 - Onboard Personnel plus RDT&E Portion of OSSG moves
Net Present Value	- \$229M	+\$119M	+\$413M	+\$98M
Payback Period	8 years	51 years	Never	48 years
Issues	Authorized versus onboard; No contractors included	Contractors 50% of the workforce	Working capital funding onboard versus authorized with no funds	Long time for payback
Impact	No real savings	Includes reality of contractors in the analysis	Cost plus mission degradation	Completes C4ISR COE alignment

COBRA Model Alternatives Comparison Table

After running several excursions or alternate scenarios, WBB concluded that no savings were possible if the correct manpower figures were used in the COBRA Model.

II. Introduction

Public Law 101-510, as amended, requires the Secretary of Defense to provide the Defense Base Closure and Realignment (BRAC) Commission a report containing the Department of Defense (DoD) recommendations to realign or close military installations within the United States and its territories. Secretary Rumsfeld complied with requirement on May 13, 2005.

The DoD recommendations are intended to align US base structure with the force structure that is expected to be needed over the next 20 years. These proposals focus on implementing DoD global force reposturing, facilitate the ongoing transformation of US forces to meet the challenges of the 21st century and restructure important support functions to capitalize on advances in technology and business practices. Overall, these recommendations are designed to support force transformation; address new threats, strategies and force protection concerns; consolidate business-oriented support functions; promote joint and multi-Service basing; and, provide significant savings.

As required by law, the BRAC process entailed comprehensive and comparable analyses of all installations in the United States and its territories, using military value as the primary consideration. In reviewing its base structure, DoD considered the capabilities needed to support potential mobilization and surge requirements, as well as the unique installation needs of Reserve Component forces. Moreover, DoD placed special emphasis on retaining the infrastructure and capabilities necessary to respond to contingencies.

DoD organized its analysis into two groups: the Military Departments which analyzed installations devoted exclusively to their requirements, as well as supporting operational forces; and Joint Cross-Service Groups (JCSGs) which scrutinized the bases and functions that constitute the DoD's common support infrastructure. The joint groups were composed of senior representatives of the Military Departments, the Joint Staff and OSD.

One JCSG, the Technical Joint Cross-Service Group (TJCSG) was chartered to review the following DoD technical functions: Research; Development and Acquisition; and, Test and Evaluation. The research function included basic research, exploratory development and advanced development. The development and acquisition function included system development and demonstration, systems modifications, experimentation and concept demonstration, product/in-service life-cycle support and acquisition. The test and evaluation function included the formal developmental test and evaluation (DT&E) and the formal operational test and evaluation (OT&E).

To baseline the TJCSG analysis and recommendation development, the group established two guiding principles and an overarching strategic framework. The two principles were:

- Provide efficiency of operations by consolidating technical facilities to enhance synergy and reduce excess capacity
- Maintain competition of ideas by retaining at least two geographically separated sites, each of which would have similar combination of technologies and functions. This would also provide continuity of operations in the event of an unexpected disruption

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In concert with these two principles, the TJCSG used a strategic framework to establish multifunctional and multidisciplinary technical Research, Development, Acquisition, Training & Evaluation (RDAT&E) Centers of Excellence which should provide the scientific and technical advances to enable DoD to develop capabilities and weapons that are technologically superior to those of potential adversaries into the future. Furthermore, the multifunctional and multidisciplinary nature of the Centers of Excellence should allow for more rapid transition of technology and enhance integration of multiple technologies. Finally, the Centers of Excellence were to be complemented by DoD's existing technical facilities that have a disciplinary focus.

The TJCSG also recognized that to effectively accomplish the DoD's RDAT&E functions, key partners outside DoD were essential, to include other government organizations, industry, universities and the international community. Finally, the rapidly changing and uncertain environment of the 21st century required that the TJCSG analysis and recommendations ensure that surge capability would be available for the future Defense RDAT&E infrastructure.

TJCSG recommendations provided the Department Centers of Excellence in the following three areas: Defense Research laboratories; RDAT&E Centers; and, Integrated Command, Control, Communications and Computers and Intelligence, Surveillance and Reconnaissance (C4ISR) Centers.

To organize its efforts, the TJCSG established five subgroups, each of which took responsibility for evaluating a set of technical activities. The subgroup of importance to the Montgomery Chamber of Commerce was the C4ISR Subgroup. Each subgroup conducted a detailed analysis for capacity, military value, scenario development and analysis; and finally developed and evaluated candidate recommendations.

III. Base Realignment and Closure Commission Language

The specific language regarding Maxwell AFB, AL, in the *Department of Defense Base Closure and Realignment Report*, May 2005, is contained below.

Consolidate Air and Space C4ISR Research, Development & Acquisition Test & Evaluation

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. Realign Eglin Air Force Base, FL, by relocating Air & Space Sensors, Electronic Warfare & Electronics and Information Systems Test & Evaluation to Edwards Air Force Base, CA.

Justification: This recommendation will reduce the number of technical facilities engaged in Air & Space Sensors, Electronic Warfare, and Electronics and Information Systems RDAT&E from 6 to 2. Through this consolidation, the Department will increase efficiency of RDAT&E operations resulting, in a multi-functional Center of Excellence in the rapidly changing technology area of C4ISR.

Payback: The total estimated one-time cost to the Department of Defense to implement this recommendation is \$254.4M. The net of all costs and savings to the Department during the implementation period is a cost of \$115.3M. Annual recurring savings to the Department after implementation are \$36.2M with a payback

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expected in 8 years. The net present value of the costs and savings to the Department over 20 years is a savings of \$238.0M.

Economic Impact on Communities: Assuming no economic recovery, this recommendation could result in a maximum potential reduction of 2,250 jobs (1,262 direct jobs and 988 indirect jobs) over the 2006-2011 period in the Dayton, OH, Metropolitan Statistical Area, which is 0.44 percent of economic area employment.

Assuming no economic recovery, this recommendation could result in a maximum potential reduction of 384 jobs (220 direct jobs and 164 indirect jobs) over the 2006-2011 period in the Fort Walton Beach-Crestview-Destin, FL, Metropolitan Statistical Area, which is 0.32 percent of economic area employment.

Assuming no economic recovery, this recommendation could result in a maximum potential reduction of 3,254 jobs (1,971 direct jobs and 1,283 indirect jobs) over the 2006-2011 period in the Montgomery, AL, Metropolitan Statistical Area, which is 1.6 percent of economic area employment.

Assuming no economic recovery, this recommendation could result in a maximum potential reduction of 212 jobs (110 direct jobs and 102 indirect jobs) over the 2006-2011 period in the San Antonio, TX, Metropolitan Statistical Area, which is less than 0.1 percent of economic area employment.

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. There are no known community infrastructure impediments to implementation of all recommendations affecting the installations in this recommendation.

Environmental Impact: This recommendation has the potential to impact air quality at Hanscom AFB, MA, and Edwards AFB, CA. Additional operations at Hanscom AFB, MA, and Edwards AFB, CA, may impact archeological sites, which may constrain operations. This recommendation may require building on constrained acreage at Hanscom AFB, MA. Additional operations on Edwards AFB, CA, may impact threatened and endangered species and/or critical habitats. The hazardous waste program at Hanscom AFB, MA, will need modification. Additional operations may impact wetlands at Hanscom AFB, MA, which may restrict operations. This recommendation has no impact on dredging; marine mammals, resources, or sanctuaries; noise; waste management; or water resources. This recommendation will require spending approximately \$0.5M cost 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 has been reviewed. There are no known environmental impediments to implementation of this recommendation.

Each recommendation, rooted in the Department's long-term force structure plan and installation inventory, was measured against eight criteria. The Department gave priority consideration to military value (Criteria 1-4), then considered costs and savings (Criteria 5) and finally assessed the economic impact on local communities, the community support infrastructure and the environmental impact (Criteria 6-8).

IV. Military Value Criteria

As required by statute, the military value of an installation or activity was the primary consideration in developing DoD's recommendations for base realignments and closures. For DoD, military value has two components: a quantitative component; and a qualitative component. The qualitative component is the exercise of military judgment and experience to ensure rational application of the criteria. The quantitative component assigns attributes, metrics and weights to the selection criteria to arrive at a relative scoring of facilities within assigned functions.

To arrive at a quantitative military value score, subgroup members began by identifying attributes or characteristics for each criterion. They weighted attributes to reflect their relative importance based on things such as their military judgment or experience, the Secretary of Defense's Transformational Guidance and BRAC principles. Metrics were subsequently developed to measure these attributes. The metrics were also weighted to reflect relative importance, again using military judgment, transformational guidance and BRAC principles. Once attributes had been identified and weighted, the subgroup members developed questions for use in military value data calls. If more than one question was required to assess a given metric, these were likewise weighted. Each analytical subgroup member prepared a scoring plan, and data call questions were forwarded to the field. These plans established how answers to data call questions were to be evaluated and scored. With the scoring plans in place, the Military Departments and JCSGs completed their military value data calls. These were then forwarded to the field by the Military Departments and Defense Agencies. The analytical subgroup members input the certified data responses into the scoring plans to arrive at a numerical score and a relative quantitative military value ranking of facilities/installations against their peers.

In selecting military installations for closure or realignment, DoD gave priority consideration to military value (the four criteria listed below):

- (1) The current and future mission capabilities and the impact on operational readiness of the total force of the Department of Defense, including the impact on joint warfighting, training and readiness
- (2) The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations
- (3) The ability to accommodate contingency, mobilization, surge and future total force requirements at both existing and potential receiving locations to support operations and training
- (4) The cost of operations and the manpower implications

In addition to the Military Value criteria, other factors were considered.

V. Scenario Development

With the capacity and military value analyses complete, the TJCSG then began an iterative process to identify potential closure and realignment scenarios. These scenarios were developed using either a data-driven

optimization model or a strategy-driven approach. Each approach relied heavily on the military judgment and experience of the subgroup members.

The optimization models incorporated capacity and military value analysis results and force structure capabilities to identify scenarios that maximized military value and minimized the amount of capacity retained. These models were also used to explore options that minimized the number of sites required to accommodate a particular function or maximized potential savings. As data results were analyzed, the subgroup members evaluated additional scenario options.

A second methodology of generating scenarios for analysis was driven by the TJCSG strategy. Scenarios developed by this method were verified against data collected in earlier capacity and military value analysis.

VI. Other Considerations Criteria

Once the decision makers determined that the particular scenario was consistent with or enhanced military value, they proceeded to evaluate the scenario against the remaining selection criteria. Those criteria include determining Payback and Economic Impact, Assessing Community Infrastructure and determining Environmental Impact. The Other Considerations criteria specifically include the following:

- (5) The extent and timing of potential costs and savings, including the number of years, beginning with the date of completion of the closure or realignment, for the savings to exceed the costs
- (6) The economic impact on existing communities in the vicinity of military installations
- (7) The ability of the infrastructure of both the existing and potential receiving communities to support forces, missions and personnel
- (8) The environmental impact, including the impact of costs related to potential environmental restoration, waste management and environmental compliance activities

In the final stages of the scenario analysis process, using analysis against all eight selection criteria, each analytical subgroup member determined which of its scenarios to recommend for approval. Any scenario recommended became a candidate recommendation. The OSSG became one of those recommendations.

VII. Operations and Sustainment Systems Group

The Operations and Sustainment Systems Group (OSSG) is part of the Operations Support Systems Wing located at Hanscom Air Force Base, MA. The Operations Support Systems Wing has more than 3,600 people assigned (to include 230 officers, 670 enlisted personnel, 1,200 civilians and 1,500 contractors). The Operations Support System Wing designs, acquires, installs and maintains operations support systems for the Air Force and the DoD. The wing, one of four acquisition wings at Headquarters Electronic System Command, acquires and maintains systems used by virtually every organization on Air Force bases world wide. The Wing is responsible for ACAT I programs valued at over \$3.1B located world wide and is considered the Information Technology Center of Excellence for the Warfighter. The primary mission areas include:

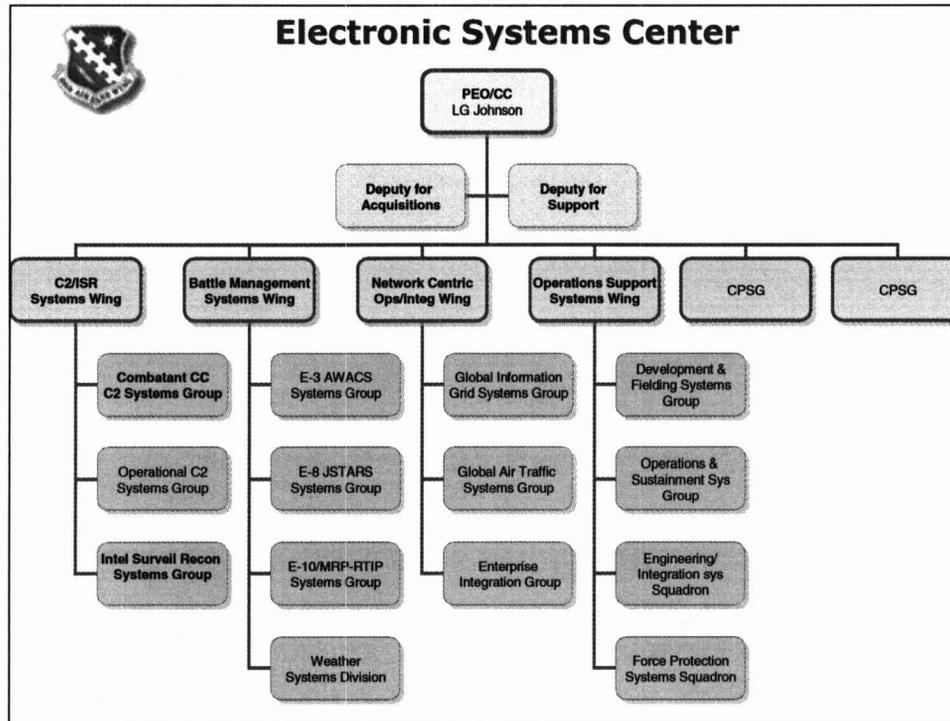
- Program Management
- Operations and Sustainment

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- Information Technology Commodities Acquisition

The wing is composed of four geographically separated units (see diagram below):

- Development Fielding Systems Group (Wright-Patterson AFB, OH)
- Operations and Sustainment Systems Group (Maxwell AFB, AL)
- Engineering/Integration Systems Squadron (Maxwell AFB, AL)
- Force Protection Systems Squadron (Hanscom AFB, MA)



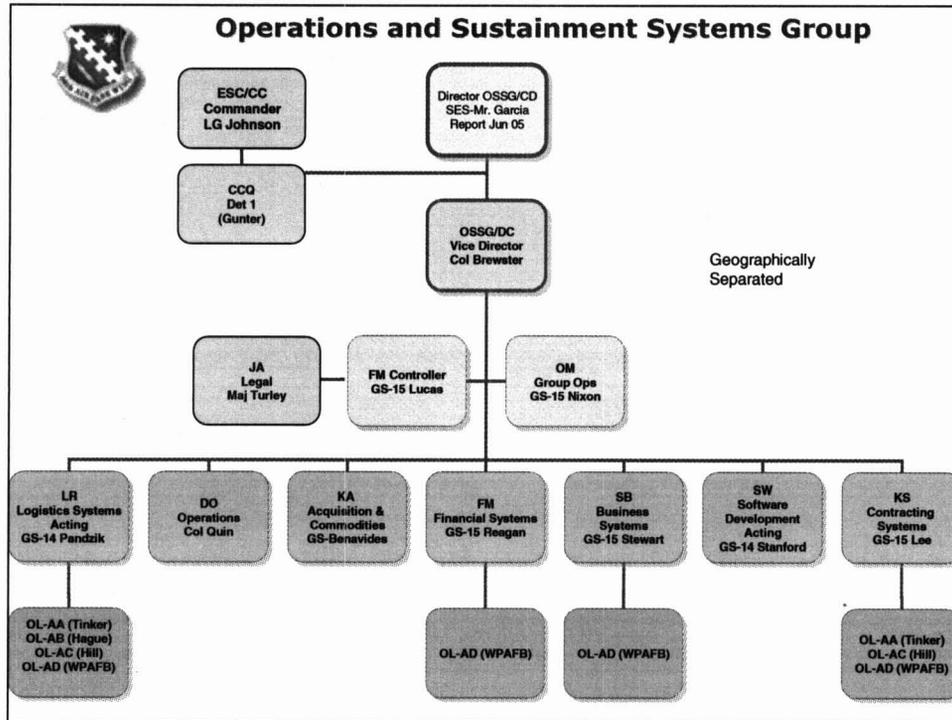
Electronics System Center with the Operations Support Systems Wing

The largest organization within the Operations Support Systems Wing is the OSSG. The OSSG provides technical and customer service support as well as acquisition and program management oversight for over 160 Combat Support Information Technology (IT) systems. The mission of the OSSG is to, *“Provide and support secure combat support information systems and networks for the Air Force and DoD components using innovative IT contracts to acquire and manage Enterprise services and commodities.”*

The OSSG also manages the Air Force standard desktop environment, and serves as the Air Force lead for software program management under the auspices of the DoD Enterprise Software Initiative. The OSSG provides Air Force Network Operations Security for circuits and routers, and provide situational awareness for their DoD customers. Their Field Assistance Branch is responsible for over 11 systems worldwide as well as providing the Air Force infrastructure support for systems such as the Integrated Logistics System for Supply Operations, the Deliberate Crisis Action Planning Execution System, the Logistics Contingency Assessment Tool, the Combat Ammunition System, the Global Combat Support System-AF, the Defense Management

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System, the Combat Information Transport System and firewalls. The OSSG has over 1,100 government employees to include a mix of officer, enlisted, civilian and contractors in geographically separated locations. See the diagram below.



Operations and Sustainment Systems Group

Additionally, the OSSG has an annual Working Capital Fund operating budget of \$303M. Finally, the OSSG manages 51 Air Force Contracts and Basic Purchasing Agreements with a total value of \$13.1B.

VIII. COBRA Model Analysis

COBRA is an economic analysis model. It estimates the costs and savings associated with a proposed base closure or realignment action. The model output can be used to compare the relative cost benefits of alternative BRAC actions. COBRA is not designed to produce budget estimates, but to provide a consistent and auditable method of evaluating and comparing different courses of action in terms of the resulting economic impacts for those costs and savings measured in the model.

The COBRA Model calculates the costs and savings of base stationing scenarios over a period of 20 years. It models all activities (moves, construction, procurements, sales, closures) as taking place during the first 6 years, and thereafter all costs and savings are treated as steady-state. The key output value produced is the Payback Year. This is the point in time where savings generated equal (and then exceed) costs incurred. In other words, this is the point when the realignment/closure has paid for itself and net savings begin to accrue. The Payback Period is the period between the end of the realignment action and the Payback year.

The COBRA Model allows alternative closure/realignment scenarios to be compared in terms of when the Payback Year is reached. Should a Payback Year not be achieved for a specific scenario, that scenario will result in a net cost rather than savings. Similarly, if a scenario has a long Payback Period it will not start to generate net savings until well after the BRAC action would have been completed. Such an action would generally be less economically beneficial than one with an earlier Payback Year.

The COBRA Model also calculates and reports the Net Present Value (NPV) for the 20 year planning period of each scenario analyzed. NPV is the present value of future costs of a scenario, discounted at the appropriate rate, minus the present value of future savings from the scenario. All dollar values, regardless of when they occur, are measured in constant base-year dollars. This is important because it eliminates artificial distinctions between scenarios based on inflation, while highlighting the effects of timing on model results. Costs and savings are calculated for each year of the 20 year planning period. For each year, total costs and savings are then summed to determine a net cost for that year. The net cost of each year is then added to the net cost for preceding years to determine the total net cost to that point in time. The sum of the total net costs for all 20 years is the Net Present Value of the scenario.

A. Baseline Case – DoD Scenario

Using the COBRA Model, WBB examined the scenario concerning the Maxwell AFB, AL, and the Operations and Sustainment Systems Group data as provided by the Montgomery Chamber of Commerce. This option will be referred to as the DoD Baseline Case. The COBRA Model calculated the Net Present Value of -\$229M (i.e., no savings) and a Payback Period of 8 years for this scenario.

After a thorough review of the COBRA Model calculations, WBB identified several inconsistencies impacting savings. The “heart” of the issue revolves around authorized end strength for the OSSG. The going in assumption for the COBRA Model calculations is that there are dollars associated with the military and civilian end strength numbers. In reality and as noted earlier, the OSSG is a working capital funded organization (as opposed to mission funding). The distinction is important. In a working capital funded organization, end strength authorizations have no funds associated with them. Moreover and by law, with a working capital fund revenue must be aligned with cost and not associated with military and civilian end strength. Furthermore, given that the OSSG just accomplished a Most Efficient Organization (MEO) competition, the OSSG is in fact at MEO strength now and no manpower savings would be realized or achieved with realignment—the savings has already been taken. Simply put, the “savings” associated with the military and civilian end strength authorizations, as assumed in the BRAC COBRA Model calculations, have already been taken in the MEO process. WBB identified some additional discrepancies in the COBRA Model calculations. They include:

- The COBRA Model data reduces the OSSG personnel levels below that which the organization identified in the recent MEO process. The MEO identified 1,015 personnel (as seen in the Actual Onboard Column below) as the number required competing within the A-76 framework, yet DoD used a figure of 839 to base their cost justifications. The figure used in the COBRA Model calculations is 30 percent lower than the authorized end strength personnel levels, and 18 percent below the actual onboard number—with no rationale provided. See the chart below

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	Authorized	30% Reduction used in COBRA	Actual Onboard (5/25/2005)	Delta from COBRA to Onboard
Officers	135	95	101	+6
Enlisted	534	374	431	+57
Civilians	528	370	483	+113
Total	1197	839	1015	+176

Operations and Sustainment Systems Group Manpower Table

- There is no data in the COBRA Model on contractor support and the associated costs. There are approximately 940 contractors (approximately 50 percent of the OSSG workforce) working in Montgomery both on-site and off-site directly supporting the OSSG. A preliminary review of contractor support costs by labor man-hour between the two geographic areas (Montgomery, AL, and Boston, MA) indicates at least a 30 to 35 percent increase in the cost for a man-hour of support from a person with the same knowledge and same skill requirements by moving the work from Maxwell AFB, AL, to Hanscom AFB, MA. Even without including the additional costs of each officer, enlisted and civilian who will receive a larger locality pay, there is a potential 15 percent increase in the overall manpower cost to operate in the long-term due to contractor labor costs
- The COBRA Model calls for Military Construction (MILCON) funds in FY06 and FY07. Based on the statutory requirement to Congress of MILCON requests two years prior to execution and the fact that the FY06 budget is under Congressional review now, it appears the proposed realignment could not take place any earlier than FY09. A further complicating factor is the need for a sophisticated, environmentally sensitive Information Technology facility to house the OSSG

In summary, the DoD Baseline Case has several “apparent” inconsistencies in the data used for the calculations. Therefore the savings (Net Present Value and the Payback Period) appear to be suspect. (Baseline Case COBRA Model Data is in Appendix 1.)

Accordingly, WBB ran five alternative scenarios or excursions. These alternative scenarios captured and evaluated the inconsistencies noted during the DoD Baseline Case COBRA Model data review. The five excursions examined include the following:

- Alternative 1 – No realignment of the OSSG. WBB ran this alternative first based on the fact that the OSSG mission is predominately operations and sustainment vice RDAT&E—the intent of the BRAC recommendation realignment to create a C4ISR RDAT&E Center of Excellence
- Alternative 2 – Baseline Case, but include the Missing Contractor data. This excursion examined the DoD COBRA run as given, but included the OSSG 940-person contractor workforce to ensure the entire OSSG workforce was included in the realignment computations

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- Alternative 3 – Move the OSSG, but use the onboard or actual workforce located at Maxwell AFB, AL, today. The intent is to see the COBRA Model results of moving the entire OSSG with the correct number of personnel (military, government and contractor)
- Alternative 4 – Use the onboard or actual workforce located at Maxwell AFB, AL, today and move the RDT&E portion of the OSSG (165 personnel) to Hanscom AFB, MA. This excursion was run to meet the intent of the BRAC recommendation to create the C4ISR RDT&E Center of Excellence with the RDT&E portion of the OSSG
- Alternative 5 – Baseline Case, plus move onboard or actual workforce associated with the RDT&E portion of the OSSG (165 personnel) to Hanscom AFB, MA. This last COBRA Model run takes the COBRA Model data as given and moves the RDT&E portion of the OSSG to create the C4ISR RDT&E Center of Excellence at Hanscom AFB, MA

The variables across the scenarios include the number of military, government civilians and contractors; and varying the organization move to include the RDT&E portion of the OSSG.

B. Alternative 1 - No Realignment of OSSG

Alternative 1 is a scenario to examine completely taking Maxwell AFB, AL, and the Operations and Sustainment Systems Group out of BRAC COBRA Model calculations. This alternative was examined because the OSSG mission is predominately operations and sustainment, not RDT&E as presented in the BRAC recommendation to create the C4ISR RDT&E Center of Excellence

Modification to COBRA Assumptions: Maxwell AFB, AL, is completely removed from the scenario.

Results: Essentially this excursion indicates the concept of the C4ISR RDT&E Center of Excellence is only feasible from a cost savings perspective if Maxwell AFB, AL, and the OSSG, or some organization of similar size, is included in some form or fashion. In short, using this scenario, the C4ISR Center of Excellence would not be realized. Using this alternative, the COBRA Model calculates the Net Present Value of +\$159M (i.e., no savings) and a Payback Period of 51 years. (Alternative 1 COBRA Model Data is in Appendix 2.)

C. Alternative 2 – Include Missing Contractor Data to Baseline Case

This alternative examines a scenario where the COBRA Model uses the Baseline Case with the approximately 940 contractors included in the movement of the OSSG to Hanscom AFB, MA.

Modification to COBRA Assumptions: The contractor costs are included in the COBRA Model calculations. Due to the fact that contractor manning is over half the OSSG workforce, the contractor costs were added to the model as Base Information (Dynamic) to account for these costs. The support is the equivalent of “industrial operations” and was removed from Maxwell AFB, AL, and added to Hanscom AFB, MA. A cost of doing business factor of 30 percent was included for contracting at Hanscom AFB, MA. The data points gathered to

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support the 30 percent figure range from 20 to 40 percent—the average was included. A contractor figure of 864 was input in the model at a man-year contract cost rate of \$100K was used for the Montgomery locale.

Results: Importantly, this excursion includes the contractor workforce—the major component of the OSSG. To make the BRAC COBRA Model analysis credible, the entire workforce must be factored in. This realignment action could not be a success with a reasonable portion of the workforce. Using this modified scenario, the COBRA Model calculates the Net Present Value of +\$119M (i.e., no savings) and a Payback Period of 51 years. (Alternative 2 COBRA Model Data is in Appendix 2.)

D. Alternative 3 - Move OSSG, but utilize actual onboard military, government civilian and contractors

The Alternative 3 scenario is a slight adjustment to Alternative 2 above. This alternative incorporates the actual or onboard number of military and government civilians at the post-MEO end strength, plus it includes the appropriate contractor data (the 940 personnel).

Modification to COBRA Assumptions: The actual onboard number of personnel vice the authorized end strength personnel numbers were used along with the contractor data (940 contractors) to see if the results were similar to the baseline and Alternative 2 excursions. Onboard personnel numbers are a true reflection of the cost savings available vice using the inflated authorized end strength. Base manpower savings remained the same as in the Baseline Case run. A 10 percent savings of personnel from the OSSG was used from the onboard personnel numbers to account for management overhead savings. This yielded an end strength reduction of 10 officers, 43 enlisted personnel and 48 contractors.

Results: This excursion allows a review of a Working Capital Funded organization vice a mission funded activity. This scenario also takes into account the recently completed MEO. Using this modified scenario, the COBRA Model calculates the Net Present Value of +\$413M (i.e., no savings) and the Payback Period is never reached. The impact is a substantial cost, plus probable mission degradation. (Alternative 3 COBRA Model Data is in Appendix 2.)

E. Alternative 4 - Utilize actual onboard military, government civilians and contractors plus move the RDT&E portion of OSSG

Alternative 4 is a slight excursion from Alternative 3. In this alternative the onboard manpower numbers are considered as in the previous alternative, but just the RDT&E portion of the OSSG is realigned to Hanscom AFB, MA.

Modification to COBRA Assumptions: Using the data in Alternative 3, the RDT&E personnel are moved. This includes 5 officers, 10 enlisted personnel, 62 civilians and 89 contractors. As compared to Alternative 3, 17 personnel vice 85 base personnel are eliminated. The remaining personnel are Operations and Sustainment focused with the OSSG.

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Results: This alternative completes the C4ISR Center of Excellence alignment at Hanscom AFB, MA. However, the Payback Period is a substantial amount of time. Using this modified scenario, the COBRA Model calculates the Net Present Value of +\$.98M (i.e., no savings) with a Payback Period of 48 years. (Alternative 4 COBRA Model Data is in Appendix 2.)

F. Alternative 5 - Baseline, plus onboard personnel and move the RDT&E portion of the OSSG

Finally, Alternative 5 takes the Baseline Case, plus the onboard personnel of the RDT&E portion of the OSSG and realigns them to Hanscom AFB, MA. It also includes the contractor workforce (approximately 940 personnel).

Modification to COBRA Assumptions: Uses the baseline numbers for manpower and moves the same personnel as Alternative 4.

Results: Using this modified scenario, the COBRA Model calculates the Net Present Value of -\$129M and a Payback Period of 10 years. These are “false savings” as the savings come from moving the authorized versus onboard figures. (Alternative 5 COBRA Model Data is in Appendix 2.)

IX. Conclusion

The Department of Defense uses a methodical approach to determine BRAC realignment and closure recommendations. A thorough review by either the Military Departments or the Joint Cross-Service Groups examines the military value, develops appropriate scenarios and evaluates a set of four additional criteria. Finally COBRA, an economic analysis model, is used to calculate the associated recommendation cost and savings to determine a Net Present Value and Payback Period.

With respect to the proposed recommendation to realign the Operations and Sustainment Systems Group from Maxwell AFB, AL, to Hanscom AFB, MA, to form the C4ISR RDAT&E Center of Excellence, several inconsistencies were found in the COBRA Model data provided by the Montgomery Chamber of Commerce. The major discrepancies included the use of incorrect manpower figures, the omission of the contractor workforce and an overly optimistic MILCON projection to meet the timely realignment of the Operations and Sustainment Systems Group.

WBB captured these oversights and ran several new excursions or alternate scenarios to evaluate these inconsistencies. Two observations became apparent: creating a C4ISR RDAT&E Center of Excellence is not feasible without including the OSSG or some similarly sized organization; after reviewing all alternatives, savings are not achieved when using the correct number of personnel (military, government civilian and contractor) in any combination of realignment alternatives. The results are summarized in the table below.

COBRA Model Excursions – Maxwell AFB, AL						
	Baseline DoD Scenario	Alternative 1- No Realignment of OSSG	Alternative 2– Include Missing Contractor Data to Baseline Case	Alternative 3 - Move OSSG using Onboard Personnel and Contractor Personnel	Alternative 4 - Onboard Personnel plus RDT&E Portion of OSSG moves	Alternative 5 – Baseline, Plus Onboard personnel and RDT&E Portion of OSSG moves
Net Present Value	- \$229M	+ \$159M	+\$119M	+\$413M	+\$98M	- \$129M
Payback Period	8 years	100 years	51 years	Never	48 years	10 years
Issues	Authorized versus onboard; No contractors included	Maxwell AFB not included in scenario	Contractors 50% of the workforce	Working capital funding onboard versus authorized with no funds	Long time for payback	Authorized versus onboard
Impact	No real savings	COE efforts not realized	Includes reality of contractors in the analysis	Cost plus mission degradation	Completes C4ISR COE alignment	False savings

A negative Net Present Value is good (-)

COBRA Model Excursions Comparison Table

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As can be readily seen in the table, under no circumstances is a savings achieved involving the realignment of the Operations and Sustainment Systems Group if the correct manpower figures are used.

Appendix 1: COBRA Data Baseline Case Files

Appendix 2: COBRA Data Excursion Files