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HOUSE APPROPRIATIONS COMMITTEE
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STATEMENT BY

MR. PAUL STRASSMANN

DIRECTOR

OF

DEFENSE INFORMATION

BEFORE THE

HOUSE APPROPRIATIONS COMMITTEE

DEFENSE SUBCOMMITTEE

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OPENING REMARKS:

Mr. Chairman and members of the subcommittee, it is a privilege to report to you on the current status of the Corporate Information Management (CIM) initiative of the Department of Defense (DoD).

In terms of expense, the CIM initiative is the largest information management program ever conceived by any U.S. business organization. In terms of schedule, it will require every moment of the 5-year period for which savings were initially targeted. CIM calls for a major reengineering and restructuring of business methods and administrative processes in DoD.

The immediate CIM goals are set by the Defense Management Report (DMR) initiatives. Each of the top three DMR cost reduction targets exceeds the annual information management budgets for the top three U.S. manufacturing companies. A significant percentage of DMR cost reductions will be accomplished as a result of the CIM initiative. As Mr. Andrews pointed out, we are now concentrating on improving information management in selected administrative areas, such as contract

payment, civilian payroll, distribution centers, and medical applications. We are also setting the foundation for applying CIM information management methods to all other DoD business areas.

We have chosen information technology as one of the tools to achieve DMR results. Our objective is to shorten the time for delivery of new computer applications by 75 percent while simultaneously realizing savings in excess of $6.0 billion in information technology through fiscal year 1997. This includes savings through reductions in systems development costs, sharing of computer software, consolidation of systems engineering design centers, and simplifying operations of data and design centers. The information technology savings also include gains from the Computer-aided Acquisition and Logistics Support (CALS) initiative and the Electronic Data Interchange (EDI) initiative for paperless processing of business transactions.

Let me emphasize, however, that CIM should not be seen as an information technology program. Although it is expected to deliver in excess of $6.0 billion of savings in information technology, CIM succeeds only insofar as it supports all DMR targets. Information technology should be seen only as the rails on which the DMR freight train can roll to deliver its results!

Even the most ambitious initiatives can succeed only by making steady progress, one step at a time. Therefore, I shall

dispense with generalities and concentrate on examples of what CIM has already accomplished. After that, I shall discuss immediate steps we are taking to make sure CIM ultimately delivers what is expected.

A. ILLUSTRATIVE EXAMPLES OF CIM RESULTS:

1. THEATER MEDICAL AUTOMATION

The start of Operation Desert Shield found the Department without the necessary medical information system capabilities to support a major joint theater operation. The medical functional group provided joint automation support for Desert Storm. This included the Theater Army Medical Management Information System, Defense Medical Regulating Information System, and Automated Patient Evacuation System. Each of these systems had to be adapted to function as an integral part of a joint theater medical operation.

The four Services began immediate implementation of required support. By November 1990, essential automation support was being provided to medical regulating, patient administration, patient evacuation, and medical logistics operations. By the start of Operation Desert Storm, this support was being provided from the Central Command theater of operations, through Europe, and into the support base in the continental United States. Throughout the Operation, the medical group worked closely with the Joint Staff, both theater commands, and the Services to provide the necessary support.

By April 1991, these automation initiatives supported 10,000 patients and tracked the movement of over $200 million in medical supplies in theater. In providing this support, time for a patient regulating request was reduced from 20 minutes to 30 seconds.

Altogether, twelve standard systems have been designated to serve medical information-handling needs of DoD Components.

2. LOGISTIC SYSTEMS

We have selected a number of current, wholesale logistic systems as candidate DoD standards. In the future, we anticipate the functional requirements represented by a large number of existing information systems in the materiel management area will be met by fewer redesigned systems. This will require considerable additional planning and analysis, but we expect substantial returns.

3. CIVILIAN PERSONNEL SYSTEMS

For the civilian personnel function, we have selected a single system - the Air Force Civilian Personnel Data System - to support 94 percent of DoD employees.

4. FINANCIAL OPERATIONS SYSTEMS

The CIM process is instrumental in enabling the Defense Finance and Accounting Service (DFAS) to consolidate diverse financial operations. DFAS is now working jointly with the

civilian payroll group to specify how the DoD payroll business shall be conducted.

The CIM functional groups are currently evaluating Army's travel module for deployment by the Air Force and are also evaluating the potential of adopting Army's Program and Budget System for deployment by the Defense Logistics Agency (DLA) and the Air Force.

The subcommittee should be aware that unification and consolidation of administrative systems is not a simple technical matter. For instance, the civilian payroll group has identified many procedural differences in current business practices among DoD Components:

-- how to calculate pay after expiration of a temporary appointment;

-- how to deliver leave and earning statements (mailing versus hand-delivery);

-- how to document time and attendance and labor accounting (extensions computed in the payroll system versus outside the payroll system);

-- how to address payment versus use of compensatory time; and

-- how to define a standard pay period. (The Military Departments use the same pay period and DLA uses an alternate pay period.)

The above may appear to be minor procedural matters. However, accumulation of such diversity makes it mandatory to change business practices and reorient people prior to attempting a systems consolidation that has a chance of succeeding.

Precipitous consolidations without consideration of human and procedural complexities have resulted in well documented administrative disasters. We shall avoid taking such risks. We shall specify improved business methods before proceeding with any standardization.

B. MEASURES TO ASSURE CIM PROGRAM RESULTS:

1. MEASUREMENT OF EFFECTIVENESS AND EFFICIENCY

The Department is now installing an aggressive approach to measure effectiveness of individual CIM initiatives. In each case, we shall ask for expected financial results and for operating measures prior to approving full implementation. The program manager will show expected cash flow, adjusted for risk and for the time value of money. This approach follows industrial practices of business analysis in justifying productivity improvement projects.

To make comparisons between different implementation alternatives, we have delivered to the Contract Payment CIM group a computerized procedure for financial evaluations. This approach will assure consistency of planning, provide a method for full disclosure of operating assumptions, and allow for quarterly audit of actual accomplishments.

We require CIM program managers to compare their projected unit costs, order-handling delays, and transaction errors with comparable private sector business practices. For example, in the case of handling purchase orders for low cost items, the Materiel Management CIM manager will examine purchasing practices of the most efficient U.S. firms. The CIM method requires performing value-engineering on individual transactions to find out how to revise existing DoD business policies and practices.

We expect most of the projected CIM savings will result from change in business methods and revision in DoD policies rather than from more efficient computerization. There is no point in having a computer do something faster if it should not be done at all!

2. MEASURING RESULTS OF THE CIM PROGRAM

Timely delivery of cost reductions specified in the Defense Management Report initiatives - without impairing effectiveness of our Armed Forces - shall be used as the proof that the CIM

program is effective. We have decided to couple CIM activities to implementation of DMR initiatives. The CIM approach to streamlining all DoD business methods and eliminating unnecessary information activities becomes the means for delivering the initiatives' results. This is why the scope of CIM covers streamlining of all DoD information work, which includes personnel, materiel, logistics, finance, and planning.

3. ROLE OF COMPUTERS IN CIM

A relatively small share of total DMR savings will accrue from simplification and standardization of information technology. Benefits from streamlining DoD's automatic data processing activities will become visible as we monitor results from technology programs just as we track all other CIM programs.

Improvements in responsiveness of organizations managing computers are essential for achieving CIM cost reduction targets while improving effectiveness of defense support operations.

4. MEASURING VALUE OF INFORMATION

Analysts studying the competitiveness of U.S. industry discovered a prevailing neglect in managing "indirect" costs, also identified as "overhead" expenditures. The value of a tank, fighter airplane, or cruiser can be evaluated, because they represent tangible military power. The value of information-handling procedures is much harder to assess,

because these costs are incurred on the basis of custom, procedure, regulation, and organization.

Industry has attacked the problem of overhead cost control through "activity-based" accounting. In this approach, indirect support costs are attributed to operating results.

We have embarked on a vigorous program to associate overhead support activities with tangible operating results. The first target for the new approach is information technology. Information services provided by large DoD data and software design centers will be placed on a fee-for-service basis. Data center and design center budgets will be determined by demand from DoD customers and not by budget allocation which cannot achieve a fair balance between supply and demand for information services.

Since the electronic industry delivers annual cost/performance improvements in the 30 to 40 percent range, adoption of fee-for-service is a prerequisite for an economically sound approach to the expected modernization of computer centers that the CIM program requires. Fee-for-service makes it possible to establish a measure of actual computer center productivity gains.

Similarly, marked productivity gains that can be achieved by means of Computer-aided Systems Engineering (CASE) methods will permit evaluation of options for delivering software support to DoD Components. Fee-for-service for design centers

will make it possible to establish a measure of competitive excellence for software efforts.

5. DATA MANAGEMENT

For CIM to succeed, we shall eliminate unnecessary labor in transcribing, translating and reinterpreting the same data. Penalties for inconsistent and redundant handling of data are incurred primarily by clerical and administrative personnel. Poor data management practices show up as costly errors in the conduct of DoD business affairs, as excessive transaction costs, and as added management layers to monitor and control work.

The Executive Level Group stated all data in DoD should be entered into the information-handling system only once, with zero defects, so it could be reused as the information passes from its origin to its final use.

All DoD data definitions are now a shared "joint" asset, rather than belonging to individual information-handling systems. Data modeling and data control shall be under direct policy guidance of the office of the Director of Defense Information.

The subcommittee may be also interested to hear that we are not viewing CIM's data management program as an isolated DoD activity.

We are in the final process of reaching an agreement with the Veterans Administration on their participation in data

sharing aspects of the CIM program. They have identified information management savings if they can make direct use of DoD personnel and medical information when veterans transfer from DoD to the Veterans Administration.

DoD suppliers will also be affected by our Computer-aided Acquisition and Logistics Support (CALS) CIM initiative. CALS addresses timely and efficient handling of information that supports weapons and commercial products acquired by the DoD. Our purpose is to improve productivity within DoD as well as reduce the paperwork required of our suppliers. For instance, we developed methods and standards for electronic transmission of engineering drawings, technical manuals, and manufacturing documentation.

6. SPEEDING UP AND REDUCING COSTS OF INFORMATION TECHNOLOGY IMPLEMENTATION THROUGH STANDARDS

To simplify DoD business methods, we shall substitute automation for labor-intensive and error prone procedures whenever economically justifiable. The urgency of DMR targets makes it necessary to install new information technology on a schedule measured in months instead of years.

In June, I shall be joined by information technology executives from all DoD Components to announce DoD's unqualified commitment to implement a standard, vendor-independent, and readily upgradable information systems architecture. This

approach is generally known as the pursuit of "open systems" architecture.

No major U.S. corporation has as yet made such a full commitment, because "open systems" architecture is still debated in public, private, national, and international standards organizations. DoD cannot wait for vendors and customers to reach full agreement on every computer systems standard.

We shall proceed, without further delay, to construct all DoD information systems according to approved Federal Standards, as defined by the National Institute of Standards and Technology. We shall focus DoD resources on accelerated adoption of Federal Information Processing Standards (FIPS). We shall continue participating in international and industry standard organizations, after endorsement from the National Institute of Standards and Technology.

All information standards activities in DoD shall be under central coordination from the new Center for Information Management within the Defense Communications Agency and guided by policy from the Director of Defense Information.

7. SPEEDING UP AND REDUCING COSTS OF INFORMATION TECHNOLOGY THROUGH SYSTEMS ENGINEERING TOOLS

Prevailing methods for specification and development of new computer applications are labor-intensive and extremely error prone. They result in excessive life-cycle maintenance costs.

At present, the overwhelming majority of DoD programming resources is consumed in maintaining computer programs handcrafted more than a decade ago.

We shall select from a wide array of available tools a DoD standard set that will be applied to the manufacture of all new computer programs. Specification and selection of standard DoD software production tools will be guided by central policy from the Director of Defense Information. This approach will finally make it possible to realize the original intent of specifying the ADA computer language as a standard DoD programming language.

Implications of adopting a standard set of software engineering tools for DoD are far-reaching. The tools will safeguard interoperability of computer applications manufactured to the new standards. DoD's goal is to apply the standard toolset to reengineering and reuse of existing software. This will minimize conversion expenses while speeding up full implementation of CIM programs.

8. SPEEDING INTRODUCTION OF CIM PROGRAMS THROUGH REDUCTION OF RETRAINING DIFFICULTIES

Human factors - not information technology - are the pacesetters for the rate of progress through application of CIM methods. Evolutionary management methods and organizational learning will always be the most important ingredients in reaching DMR goals.

CIM calls for changed work habits. Rapid changes expected under CIM initiatives will require retraining of perhaps as many as one million DoD employees. Training will have to be continuous and personalized, because local conditions and individual skills will dictate the pace of change.

Information technology will play a major role as an ever present tutor, available to every person whenever they need on-the-job assistance. Existing information systems and information networks possess a confusing variety in appearance, procedure, and in visual perception. Therefore, they are not suitable as a means for understanding what needs to be done.

We shall proceed, as part of adopting Federal Information Processing Standards, to apply a standard graphic appearance to all new computer screens to make them suitable as training aids.

I thought members of the subcommittee would be particularly interested to hear about these important behavioral dimensions of the CIM effort. Management of the CIM program has been, is, and will always remain an endeavor that depends on people for its achievement.

C. CONCLUDING REMARKS:

Since 1955, I have managed many organizations in their quest to meet challenges of the electronic age. Although nothing in my experience - or anyone else's - compares with the

scope and demanding schedule of the CIM program, I am convinced that it shall succeed.

Our objectives are clear. The human resources at our disposal are equal or better than anything I have ever seen. The technical means are available. The need has never been greater.

As CIM evolves over the next several years, I am confident you will be pleased when you examine evidence of what has been accomplished.