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STATEMENT OF
CHARLES A. BOWSHER
COMPTROLLER GENERAL
OF THE UNITED STATES

BEFORE THE

SUBCOMMITTEE ON LEGISLATION AND NATIONAL SECURITY
HOUSE COMMITTEE ON GOVERNMENT OPERATIONS

ON

THE DEFENSE SCIENCE BOARD'S TASK FORCE ON EMBEDDED
COMPUTER RESOURCES ACQUISITION AND MANAGEMENT

Mr. Chairman and Members of the Committee:

I am pleased to be here today to discuss our views on the Department of Defense (DOD) Instruction 5000.5x and our review of the objectivity of the decisionmaking process used by the Defense Science Board's Task Force on Embedded Computer Resources Acquisition and Management. The Defense Science Board convened this task force in August 1981 to review, evaluate, and make recommendations on DOD's acquisition, management, and utilization of computers to support its military mission.

As part of its mission, the task force was to examine whether the policies proposed in DOD Instruction 5000.5x to govern computer standardization are appropriate. The objectives of

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the proposed Instruction are to curtail high costs from hardware and software proliferation and increase the effectiveness of embedded computer management. To accomplish this, DOD has chosen to limit the number of architectures that could be used for the design and development of computer hardware and software for the tactical environment. Moreover, DOD would require ownership of standard architectures for military embedded computers.

We reported to you earlier that although proposed DOD Instruction 5000.5x had merit during the 1970s, our evaluation raises some serious issues that challenge its validity in the time frame of the 1980s. Some of the salient points for consideration are:

--Aggressive pursuit of a standard high order language, such as Ada, could alleviate the software proliferation problem and at the same time permit the Government to fully capitalize on architectural advances.

--Modern computers have substantially fewer parts and in many cases are a computer on a single board thereby reducing the need for extensive logistics support.

--Lower hardware unit costs and high hardware quality are in fact available in the commercial market because of the technology and broader market base.

--Improved competition using militarized versions of commercial computers will open up competition to many firms.

--The ultimate impact of Instruction 5000.5x would result in DOD very likely running the risk of getting locked into obsolete architectures.

We recommended that the Secretary of Defense not implement Instruction 5000.5x and that the services reevaluate their ongoing standardization efforts. We believe these recommendations are still appropriate.

Although DOD has not formally adopted Instruction 5000.5x, each branch of the service has developed a program to implement principles and policies commensurate with the Instruction. The Defense Science Board announced its support of the proposed Instruction in January of this year after the task force's last meeting. The task force formally briefed the Defense Science Board in February. Although the task force has not yet issued a final report, in April the Secretary of Defense affirmed his commitment to the policies expressed in the proposed Instruction.

In response to a later request from you, we reviewed the makeup of the task force and its deliberations to see if its conclusions might reasonably be relied upon as having been independently and objectively reached.

It should be understood that the stakes underlying the policy alternatives are high. Some firms heavily engaged in providing computers to support military missions have little or no commercially oriented computer capability. It obviously is advantageous to such firms for DOD to establish a policy of standardization on their computer lines. If DOD relied upon the commercial market for computer innovations, these military-oriented firms would stand to lose DOD business. It, therefore, is critical, given the huge sums involved, that any group established to judge and make recommendations on the standardization issue be as free from overall bias as possible.

We recognize that a significant portion of the expertise required for a meaningful evaluation resides in individuals

associated with firms that have interests in DOD's computer efforts. That being so, the financial and employment ties of task force members should be thoroughly analyzed to insure the absence of inherent biases and conflicts of interest. In our opinion, DOD did not properly attend to this important requirement.

At the time of the task force's deliberation, the Army had entered into four advance development contracts aimed at the eventual selection of a single production contractor to fill the Army's requirements for embedded computers. To date, one of those four contractors has been eliminated from the competitive selection process. Of the remaining three, two will be awarded engineering development contracts and one of those two will be awarded the Army's production contract for embedded computers.

The Navy's program has progressed beyond the advance development stage. Two companies have been awarded engineering development contracts for the Navy's two shipboard computers. One of those two companies will be awarded the production contract for the shipboard computers. A third company has been awarded the Navy's production contract for airborne computers.

The Air Force has approached standardization differently. Unlike the other services, it has avoided standardizing below the instruction set architecture level. In doing so, it has contracted with over 20 companies, each of which are producing a different item to meet the Air Force's specification for embedded computers.

We reviewed financial disclosure statements of task force members and found that 7 of the 11 members had financial interests in one or more of the firms that have standardization contracts under the Army, Navy, or Air Force programs:

--Two members received salaries from and had stockholdings in at least one of the standardization contractors. One received a salary and held stock in an Army contractor. The other received a salary from an Air Force contractor and held stock in contractors for all three services.

--Two received salaries from standardization contractors; one from an Army and the other from a Navy contractor.

--One held stock in both Army and Navy standardization contractors.

--Two received consulting fees from Air Force standardization contractors.

Two of the seven members whose interests are noted above also had interests in commercially oriented computer firms that were not known to be aligned with the DOD standardization effort. One member had a stock interest in a major commercially oriented firm.

Although the task force examined the standardization programs of all the services, it focused on the Army program. Four of the members had financial interests in Army standardization contractors.

In summary, the task force was composed of five members with financial interests in standardization contractors, two members with interests in both standardization contractors and commercially oriented firms, three members with no relevant financial interests, and one member with an interest in a commercially oriented firm.

Given the tilt of task force membership toward interests that support the proposed policy, it is our view that the conclusions of the task force cannot reasonably be looked upon as having been objectively reached, irrespective of the merit of those policies. This view is reinforced by the manner in which the Department provided information to the task force and by the impressions many of the contractors conveyed to us.

We interviewed officials of 23 computer firms and associations that provided comments to DOD. Of 13 that commented on the task force's composition, 8 officials stated they believed the task force was unbalanced. The remaining five did not consider balance to be a problem. Also, 9 of the 14 that commented on the task force's use of input told us they did not believe the task force used their comments. Five of the nine stated they believed the task force had made its decision before receiving their comments.

In conclusion, we believe that the findings of the task force cannot be relied on as an independent assessment of DOD's proposed policies on embedded computer resources acquisition and management. DOD did not take adequate steps to form a balanced task force or prevent the appearance of conflicts of interest. Moreover, the procedures used by the task force in its deliberations did not assure adequate consideration of all points of view. Thus, DOD did not take appropriate action to counter the appearance of bias.

There is a question as to whether the Department paid enough attention to conflict-of-interest questions arising from members

reported financial interests. We have conferred with the Department of Justice on this matter and will be referring it to the Department for its consideration.

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This concludes my prepared comments. The results of our work is discussed in more detail in a report we will be issuing to the Committee Chairman. I will be happy to answer any questions you may have.