



UNITED STATES GENERAL ACCOUNTING OFFICE  
WASHINGTON, D.C. 20548



LOGISTICS AND COMMUNICATIONS  
DIVISION

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MAR 25 1977

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Henry W. Meetze, Director  
Office of Automated Data Systems  
United States Department of  
Agriculture

Dear Mr. Meetze:

[USDA

Reference is made to recent discussions between you and members of our respective staffs concerning the Department's proposal for handling conversions in ADPE procurements and Mr. Long's informal memorandum of January 10 which outlined the method, criteria, and constraints.

We generally concur with the suggested approach, with several modifications (see attached revision) which I understand meet with your approval. We also concur that the proposed approach be used on a test basis in the pending procurements for the Kansas City and New Orleans Computer Centers. As suggested by you, and subsequently requested by Congressman Brooks' staff, we will monitor application of the approach in the two procurements for possible applicability to other ADPE procurements by the Government.

Please contact me if you have any questions.

Sincerely yours,

Donald L. Eirich  
Associate Director

Attachment

- bc: Director, LCD
- Director, FGMSD
- Director, CEC
- General Counsel
- Assistant Commissioner, ADTS
- G.W. Dodson, Jr.
- W.L. Anderson, FGMSD

Please abstract  
attachment

7/16/87

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PROPOSED METHOD FOR HANDLING CONVERSIONS

Conversion would be a mandatory option in the competitive procurement for computer equipment. That is, it would be mandatory for a hardware vendor to quote a separate price for the conversion part of the procurement and optional that the government accept that offer. Only the conversion dollar amount proposed by the hardware vendor would be considered in the evaluation of the conversion aspect of that vendor's overall proposal. All equipment vendors will also be required to offer, as a mandatory option, two persons as conversion monitors. The Government may require these two persons to monitor the conversion even if it is not done by their employer, the equipment vendor. After an award for equipment is made (so that the targeted computer system is known), then a solicitation document for conversion would be issued to software vendors. At this time, the successful equipment vendor would be given an opportunity to give his "best and final offer" for conversion.

Award for conversion would then be made according to predetermined criteria identified in the Request for Proposal (RFP).

This is a "two-step" type procurement which has many advantages and meets the spirit, as well as the letter, of federal policy and regulation. These aspects are more fully discussed later.

a. Criteria for Conversion: The following criteria determine what is properly to be included in the cost of software conversion:

- (1) Application programs must be standard COBOL or FORTRAN (FIPs or ANSI). It is recognized that completely forbidding the use of vendor-unique extensions probably is not feasible in the current technical environment. However, when such extensions are encountered during the conversion and reprogramming is needed to replace them, such reprogramming shall use only standard-defined language whenever possible.

When conversion to the new system requires use of an extension unique to the new vendor, such use shall be documented because it will eventually affect another system procurement. Such documentation of the use of extensions in the new compilers will include a trade-off analysis showing that the effects of the extensions (e.g., faster execution or use of less storage space) is substantial enough to offset the added effort that will be necessary for the eventual conversion.

Use of other higher-level programming languages, such as PL/1 or BASIC, shall also disqualify application programs for inclusion in the conversion cost. Where both FIPS and ANSI standards exist for the same language (true of COBOL in Feb. 1977), the FIPS standard shall govern.

- (2) Programs must be needed by the agency. This will be checked by an ADS review with agency management.
- (3) Programs must have an economic life equal to or greater than the target computer systems life. This will be checked by an ADS review with agency management.
- (4) Programs must be running on the existing computer system at the time the Delegation of Procurement Authority (DPA) is granted.
- (5) Redesign and resystemization shall be considered in preference to conversion for parts of the software inventory which are inappropriate for conversion such as software originally written for obsolete first and second generation hardware systems. The analysis by which a redesign/resystemization decision is made must be documented and the documentation must be retained.

b. Contract Constraints: The following constraints are placed upon the contract requirements for conversion:

- (1) Adequate documentation will be provided to the vendor. A vendor will not be liable for conversion of programs for which he does not receive documentation.
- (2) The specific volume of conversion will be stated in the RFP. A vendor will not be liable for conversion above the stated volumes.
- (3) Only the conversion dollar amount proposed by the hardware vendor will be considered in evaluating the conversion part of his overall proposal.
- (4) Hardware vendors and vendors of conversion services will be appraised of the basis for making awards in the Request for Proposals (RFP).

c. Proposed Approach to Conversion Evaluated Against

Federal Policy and Regulation:

FEDERAL POLICY AND  
REGULATION

Programs in high level  
language (Recommendation  
12, House Report (4-1746).

Conversion costs be direct  
out-of-pocket costs when  
evaluating equipment for

HOW USDA APPROACH  
SATISFIES THESE

All programs are in COBOL  
or FORTRAN (FIPS or ANSI).

Only contract costs proposed  
by vendor are considered.

proposals. (Recommendation  
13, House Report 94-1746.).

Conversion should be separately  
computed and open up for bid by  
vendors specializing in con-  
version. (Ltr. dated 12-21-76  
from Rep. Brooks to Sec. Knebel).

Free and open competition  
for conversion (FMC 74-5).

Economic life of programs  
to be converted (FMC 74-5).

Redesigning instead of  
converting considerations  
(FMC 74-5).

By having a "two-step"  
type procurement; that  
is, first having equip-  
ment vendors make an  
offer and then have the  
software vendors make  
a proposal after award for  
equipment is made.

Both equipment vendors and  
software vendors have  
opportunity to offer pro-  
posals on conversion, i.e.,  
more competition yields  
better prices.

Only those programs with an  
economic life equal to the  
systems life are to be converted.

Redesign or resystemization  
will not be a proper subject  
for conversion. Where appro-  
priate redesign will be the  
preferred method.

Delineating conversion  
costs in solicitation  
document (FMC 74-5).

By having a "two-step"  
type procurement.

d. Advantages and Disadvantages:

(1) Advantages:

- Meets the requirements of federal policy and regulations.
- Opens competition to both equipment and/or software vendors.
- Considers only real "out-of-pocket" costs in evaluating equipment proposals.
- Places government in a stronger competitive position while keeping its options open.
- Establishes firm guidelines as to what is a proper subject for conversion.
- Government has to think through and develop better plans for conversion.
- Eliminates unfair bias attributable to conversion in evaluating equipment proposals.
- Eliminates software vendors objections (especially those specializing in conversion) where they have been previously excluded from submitting an offer on conversion when new computer equipment is being installed.

-Gives an equipment vendor an "escape hatch" if he really isn't interested in undertaking conversion by enabling him to gear his proposal to suit his own position.

-Requirements a(2), a(3), and b(1) put pressure on installations to clean up their inventories of applications software and documentation.

(2) Disadvantages:

-Creates more work for the Government. (This could be an advantage when considering how well conversion must be planned.)

-Delays the time when conversion can begin.