

U.S. DEPARTMENT OF AGRICULTURE  
WASHINGTON, D. C. 20250

<b>DEPARTMENTAL REGULATION</b>	<b>NUMBER:</b> 3130-002
<b>SUBJECT.</b> Microcomputer Policy	<b>DATE:</b> August 18, 1986
	<b>OPI:</b> Agency Technical Services Division OIRM

## 1 PURPOSE

This regulation provides policy guidance for the -acquisition and operation of microcomputers in USDA.

## 2 CANCELLATIONS/CHANGES,

This regulation supersedes Departmental Regulation 3130-2, Microcomputer Policy, dated May 24, 1984.

The principal changes incorporated in this new Departmental Regulation are:

a Microcomputers must be purchased using the Agriculture Microcomputer Productivity System (AMPS) mandatory requirements contract.

b DEPNET must be used to satisfy telecommunications requirements.

c All LAN acquisitions must be reviewed by the Office of Information Resources Management/Telecommunications Division

and all agencies and staff offices in the Washington, D.C. complex wil.1 use the Departmental LAN backbone system.

### 3 REFERENCES.

Managing Enduser Computers in the Federal Government, June 1983, OIRM, GSA.

Agriculture's Microcomputer Productivity System (AMPS) for Enhanced Program Delivery with Electronic Data Systems Corporation, Fiscal Year 1985, OIRM, USDA.

OR 3130-1, Technical Approval for IRM Products and Services, May 28, 1985. OR 3300-1, Telecommunications, April 16, 1984.

### 4 ABBREVIATIONS

DILS Departmental Information Locator System

IRM. Information Resource Management

LAN Local Area Network

OIRM Office of Information Resources Management

DEPNET Departmental Network (Telecommunications Contract with GTE Telenet)

### 5 DEFINITIONS

a Agencies. USDA agencies and staff offices.

b Instrumentation Systems. Those systems which are used in conjunction with or to control laboratory instruments or equipment such as gas chromatographs or mass spectrometers.

c Microcomputer. One of a variety of general purpose computers manufactured utilizing one or more microprocessors. Microcomputers can range from computers with relatively small amounts of memory to computers with large amounts of random access memory and several peripheral devices. They normally require no special environmental site preparation. They are often called personal, professional, or end user computers.

d Process Control Systems. Those systems used for real-time regulation of physical processes or reactions, in either laboratory or production situations.

e Sensitive Systems. Systems which process national security, personal, financial, proprietary, or market-sensitive data systems which are time-critical; systems which affect life critical situations; systems which have a significant impact on agency operations; or systems whose reconstruction would be difficult or expensive.

f Compatibility. Compatibility is the ability to access data generated on one computer and use it in a meaningful way on another computer with a minimum of modification. Areas of concern are those related to processor type, type of operating system, diskette formatting, data storage formats, and version-to-version software changes. Compatibility among systems will be achieved when:

- (1) programs can be operated on each without adjustment;
- (2) through the use of common format and protocols, data can be interchanged without modification via telecommunications; and
- (3) diskettes can be exchanged and utilized.

## 6 POLICY

OIRM will evaluate this microcomputer policy annually.

The acquisition and use of microcomputers will be included in an agency's Long-Range IRM Plan, which will explain how microcomputers fit into the agencies total information architecture, including minicomputers, mainframe computers, and telecommunications functions (local area networks, DEPNET).

Acquisition activities will be consolidated whenever possible.

Microcomputers that are an embedded part of scientific equipment are excluded from the policy guidance of this regulation.

## 7 RESPONSIBILITIES

Agencies and Staff Offices will:

a Conform to the requirements of OR 3130-1., Technical Approval for IRM Products and Services. This includes, such items as

agencywide compatibility, consolidated acquisitions, justification studies, documentation consistent with the size

and complexity of each acquisition and consideration of security requirements. It defines levels at which technical

approval is required from OIRM.

b Correlate agency acquisition plans and actual acquisitions.

c Use off-the-shelf applications software rather than specially developed programs using lower level programming languages Guide application development to reduce redundancies.

d Assure that proposed equipment will provide adequate and convenient backup capability.

e Conform to the requirements of DR 3300-1, Telecommunications, for LAN requests and other areas of utilization for communication.

8 REPORTS

a Planning. Agency intent to acquire microcomputers will be discussed in the agency Long-Range IRM Plan and detailed (approximate number and estimated cost) in Exhibit 43-b of the agency's annual Office of Management and Budget's A-11 submission.

b DILS. Agencies will use the Departmental Information Locator System to maintain an inventory of acquired microcomputers when DILS becomes operational.

9 REQUIREMENTS FOR ACQUISITION

a Agencies will use the Departmental contract with Electronic Data Systems as the mandatory microcomputer source of supply. This contract is identified as the AMPS (Agriculture Microcomputer-Productivity System) contract. If requirements cannot be met by the AMPS contract,

waivers may be granted. Documentation in agency files will be maintained on all waivers. Procedures to be followed are described in the AMPS Enhanced Program Delivery with EDS, OIRM.

b Agencies will conduct requirements, feasibility, and cost benefit studies commensurate with the size and complexity of each proposed system; only minimal study is required for small expenditures. Documentation will be maintained in agency files for reference. These studies will address security considerations. Acquisitions will be aggregated for both microcomputer hardware and software when requirements can be met by consolidated acquisition.

c Microcomputers acquired will use at least one of these operating systems in normal day-to-day operations:

(1) MS-DOS9

(2) PC-DOS, or

(3) UNIX

d If program development is required, support of one or more of **the following programming standard** languages is required: COBOL, FORTRAN, BASIC, ADA, PASCAL, or C.

NOTE: Off-the-shelf application software should be first choice, while programming in low level programming languages is a last alternative. Waivers may be granted; and agencies will maintain files to document waivers.

e All planning for the acquisition of microcomputers will address the current or future requirement of communicating to remote facilities via DEPNET. Telecommunications, originating and ending outside a local dialing area, must be accomplished using DEPNET.

The Federal Standard 1041 (CCITT X.25) is the set of communications protocols for access/interface with-DEPNET and is available for-microcomputers. When larger volumes of data must be transferred and highly reliable, error-checked data transmission is required, X.25 must be used.

Microcomputers to be used for interactive communications must be capable of using the asynchronous ASCII (-TTY) protocol or the synchronous IBM 3270 protocol. Microcomputers used as remote batch processing workstations must be capable of using IBM 2780/3780 protocols, although an X.25 file transfer approach is recommended.

Applications which will be using asynchronous protocol for data transmission should consider some form of data error checking facility such as "Xmodem", "KERMIT", or 11X.PV. Error detection schemes of this type are incorporated into many communication software packages. Data corruption due to transmission difficulties may be difficult to detect unless internal audit controls are built in.

All LAN acquisitions will be reviewed by OIRM/TD. Technical approval is required before an agency may proceed. Requests for technical approval will fully describe the proposed network and the application to be served.

All agencies and staff offices located in the Washington, D.C. complex will use the Departmental LAN backbone system to satisfy current and future data communications requirements.

Any existing LAN system will become part of the Departmental LAN. Any expansion of existing LAN systems, that involves multi-facility communications will be accomplished on the Departmental LAN system.

## 10 OPERATIONAL ENVIRONMENTS AND GUIDELINES

a When microcomputers are used in a telecommunications environment, security requires special, strict safeguards. Sensitive systems shall not be installed in a microcomputer network unless adequate software is acquired or developed and adequate procedures are established to provide the requisite security. Examples of controls which may be used are:

- (1) Designating one computer to manage the network through the use of access control and logging software.

(2) Use of Transmission Error Detection Protocols (Xmodem, KERMIT, X.PC).

(3) Data encryption (hardware encryption, only).

b Agencies should freely exchange information and share non-proprietary software (excludes proprietary software; see Section 10d).

c When microcomputers are used as terminals communicating with host computers, all security features provided by the host must be used; access keys to the host computer must be protected and passwords changed frequently.

d Agencies will inform employees that USDA strictly forbids violation of copyrights. Much of the most popular software currently in use is copyrighted, with all rights reserved to the copyrighter. This means that any copying, duplicating, selling, or other distribution of the software for other than backup use by the lawful users of the software is a crime. Commercially available software which is copyrighted generally may only be entered or its copy-entered from the storage medium into the computer and executed by the lawful user. Willful violation of the Copyright Law of the United States can result in civil damages of up to \$50,000 in addition to actual damages, plus criminal penalties of up to 1 year imprisonment and/or a \$10,000 fine.

e Agencies will establish a means to manage ADP data, computer software, and related files effectively in the highly distributed microcomputer environment. This includes controlling data by establishing ownership and sensitivity; determining, when multiple copies of the same data are kept and which is-the "official" one; and assigning and executing responsibility for access control management, use, disclosure, updating, and disposition. Controls for retention of ADP data, software, and related files shall comply with agency requirements for records management, or, in the absence of those, comply with the Federal General Records Schedule 20. With the increasing use of the computer in the home to facilitate job related activities, additional concerns regarding the full whereabouts of Government data become more serious.

This issue should be addressed by establishing agency data rules.

f Agencies will assure continuity of operations for microcomputer applications. Because of the personal nature of the microcomputer environment, special care must be taken to ensure operational continuity. Agencies must plan for responses to equipment, power, and communication failures; develop procedures for disaster recovery from fire or flood; and develop contingency plans for the continuity of microcomputer applications. Adequate documentation and employee cross-training must be provided to assure interrupt-free workflow.

## 11 INQUIRIES

Contact Agency Technical Services Division, OIRM, at FTS 447-3456.

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