Title	**Minimum Workstation Configuration Guidelines**
Category	**Hardware Architecture**
Date Adopted	
Date of Last Revision	**September 7, 2001**

A. *Authority*

Section 86-1506 (6). "(The Nebraska Information Technology Commission shall) adopt minimum technical standards, **guidelines**, and architectures upon recommendation by the technical panel created in Section 86-1511."

B. *Purpose and Objectives*

The purpose of this document is to ~~define and clarify guidelines,~~ describe **minimum** ~~performance~~ configurations, ~~and establish purchasing guidelines~~ for personal computers, in order to simplify technical support and enable a secure desktop environment. These guidelines are not intended to endorse or support any single hardware or software vendor. ~~They are presented to promote conformity and to ensure compatibility with future state initiatives.~~ These guidelines are subject to periodic review and revision.

As minimum configurations, these guidelines are recommendations to be considered in conjunction with other factors, including financial constraints, performance requirements of specific applications, and an agency's networking environment.

The primary objective of these guidelines include recommendations to:
1. Improve versatility and compatibility of desktop systems;
2. Provide a guide to agency on when to upgrade existing personal computers;
3. Reduce ~~maintenance~~ technical support problems; and,
4. ~~Provide agencies with a set of purchasing guidelines that should satisfy future state initiatives~~ Provide a secure desktop operating system.

As the State of Nebraska begins to develop Internet enabled applications, and e-Government and e-Business applications that are delivered over public and private Intranets and the Internet, it is imperative that agencies maintain desktop clients that can efficiently run these new applications. Agency desktop personal computers should be able to:
1. Execute network applications;
2. Support Internet technologies;
3. Extend the desktop communications to the state telecommunications backbone;
4. Support e-Business and e-Government applications; and,
5. Provide desktop security, encryption, and virus protection services when connected to the state telecommunications systems.

A. *Standards and Guidelines*

1) Existing Personal Computers:

In order to avoid obsolescence, agencies should develop a plan to upgrade or replace existing personal computers if they do not support the following minimum system requirements:

Minimum Hardware Guidelines for Existing Personal Computers
    (1) CPU: 133 MHz or higher Pentium-compatible CPU
    (2) Memory: 64 MB RAM
    (3) Hard Disk: 2 GB hard disk with a minimum of 650MB of free space
    (4) Operating System:
        (a) Windows 98, 2nd Edition (physical security policies should be in place)
    (5) LAN Connection:
        (a) Ethernet 10/100
        (b) 4MB Token Ring

2) **Minimum** New Personal Computer Purchasing Guidelines:

When purchasing new personal computers, an agency should consider the following minimum guidelines.

  a. Standard Desktop Hardware
    (1) CPU: 500 MHz Pentium-compatible CPU or higher
    (2) Memory: 128 MB RAM or higher
    (3) Disk: 6 GB or larger
    (4) LAN Connection: Ethernet: 10/100
    (5) Operating System:
        (a) Windows 2000 (recommended)
        (b) Windows NT 4.0 Service Pack 6a, (with 128 MB RAM and 128 bit encryption)
        (c) Windows XP (requires 256 MB RAM)
  b. GIS Workstation Desktop Hardware
    (1) CPU: 500 MHz Pentium-compatible CPU or higher (650 MHz or higher recommended)
    (2) Memory: 128 MB RAM (256 MB RAM recommended)
    (3) Disk: 10 GB Fast Open or larger (e.g., SCSI)
    (4) LAN Connection: Ethernet: 10/100
    (5) Operating System:
        (a) Windows 2000 (recommended)
        (b) Windows NT 4.0 Service Pack 6a, (with 128 MB RAM and 128 bit encryption)
        (c) Windows XP (requires 256 MB RAM)
  c. Server Hardware:
    (1) CPU: 500 MHz Pentium-compatible CPU or higher (650 MHz or higher recommended)
    (2) Memory: 256 MB RAM minimum up to 4 gigabytes (GB) maximum (the higher the memory, the better the performance)
    (3) Disk: 10 GB Fast Open or larger (e.g., SCSI)
    (4) CPU Support: Up to four CPUs on one machine

(5) LAN Connection: Ethernet: 10/100 minimum (Fast Ethernet if available)
(6) Operating System:
    (a) Windows 2000 (recommended)
    (b) Windows XP Server
d. Software Recommendations:
(1) Office Productivity: MS Office 2000 Standard Edition (recommended)
(2) Simple Terminal Emulation:
    (a) TELENET3270
    (b) TELENET5250
(3) Advanced 3270/5250 Terminal Emulation with Host Addressable Printing
    (a) IBM Host Client Access Package
(4) Internet Browser:
    (a) MS Explorer 5.0 or higher with 128-bit encryption, and XML compliance.
    (b) Netscape 6.4 or higher with 128-bit encryption, and XML compliance.
(5) Virus Protection:
    (a) Anti-Virus software (Norton Anti-Virus recommended)
    (b) Anti-Virus subscription service to protect against newest attacks

3) All agencies and local government agencies that utilize networking services of the Nebraska Department of Administrative Services' Information Management Services Division and/or the Division of Communications should migrate to Windows NT 4.0 or Windows 2000 Professional in order to support network security.

4) Any agency or local government agency that operates a direct connection to the public Internet shall install firewall services between their public Internet connection and any connection to the state telecommunications network.

5) All agencies that receive public Internet e-mail service shall require virus protection on the desktop or mail server.

D. Key Definitions
1. <u>Agency</u> shall mean any governmental entity, including state government, local government, or third party entities under contract to the agency.
2. <u>Networking Services</u> shall mean any system that transmits any combination of voice, video, and/or data between users.

E. Applicability
These guidelines are intended to be sufficiently generic to apply to a wide range of governmental and educational agencies in the State of Nebraska.

Agencies should follow these guidelines whenever they intend to support networking services on the desktop. The guidelines may not apply whenever the desktop does not share network services, when there is no connection to state or local networking services, or whenever an application requires a different hardware and software configuration to function.

F. Responsibility
1. <u>Division of Communications</u>
2. <u>Information Management Services Division</u>
3. <u>Nebraska Information Technology Commission</u>. The NITC provides strategic direction for state agencies and educational institutions in the area of information technology. The NITC also has statutory responsibility to adopt minimum technical standards and guidelines for acceptable and cost-effective use of information technology. Implicit in these requirements is the responsibility to promote adequate accessibility for information systems through adoption of policies, standards, and guidelines.

G. Related Policies, Standards and Guidelines
Category 5e Cabling Standards
Other Network Architecture Standards (to be developed)