

Idaho Technology Authority (ITA)

ENTERPRISE STANDARDS – S3000 NETWORK AND TELECOMMUNICATIONS

Category: S3540 – NETWORK CONNECTIVITY AND TRANSPORT – LAN BACKBONE

CONTENTS:

- I. [Definition](#)
- II. [Rationale](#)
- III. [Approved Standard\(s\)](#)
- IV. [Approved Product\(s\)](#)
- V. [Justification](#)
- VI. [Technical and Implementation Considerations](#)
- VII. [Emerging Trends and Architectural Directions](#)
- VIII. [Procedure Reference](#)
- IX. [Review Cycle](#)
- X. [Contact Information](#)
[Revision History](#)

I. DEFINITION

A Local Area Network (LAN) backbone is the infrastructure used to support an extended LAN campus. A LAN is used to link computers and/or peripherals in a limited area, usually less than two (2) miles. A LAN allows users to communicate and share information, data, and applications.

II. RATIONALE

Idaho State government must be able to easily, reliably, and economically communicate data and information to conduct State business. LAN backbones are endorsed by ITA for use in State government local area network campuses. The standards recommended by the Institute of Electrical and Electronics Engineers (IEEE) are recognized as the primary standards for LAN backbones.

III. APPROVED STANDARD(S)

1. 100BaseT – Ethernet (IEEE 802.3);
2. 1000BaseT – Ethernet (IEEE 802.3); and
3. ATM.

IV. APPROVED PRODUCTS(S)

Standards-based products and architecture

V. JUSTIFICATION

Products and LAN backbone implementations must conform to one of the approved standards. Future products and LAN backbone implementations should conform to Ethernet (IEEE 802.3) and ITA [Standard 3510 – Network Connectivity and Transport – Local Area Network](#).

VI. TECHNICAL AND IMPLEMENTATION CONSIDERATIONS

The deployment of a Local Area Network Backbone is a complex task that requires skilled resources. It is also important to carefully consider the security implications of the deployment, administration, and operation of a LAN backbone.

VII. EMERGING TRENDS AND ARCHITECTURAL DIRECTIONS

Recent trends indicate increasing use of Ethernet (IEEE 802.3) technologies in Local Area Network backbone implementations.

VIII. PROCEDURE REFERENCE

Network Connectivity and Transport – LAN Backbone used on the State of Idaho’s Wide Area Network must comply with the Department of Administration’s “[P3020 – Connectivity and Transport Protocols](#).”

IX. REVIEW CYCLE

Twelve (12) Months

X. CONTACT INFORMATION

For more information, contact the ITA Staff at (208) 605-4064.

REVISION HISTORY

07/01/13 – Changed “ITRMC” to “ITA”.

6/16/09 – Added Procedure Reference and deleted Timeline

9/13/06 – Section VIII, Review Cycle, updated to reflect 12-month review rather than 6-month review. Warranted due to well established industry standard that is not likely to change in the near future.

Effective Date: April 24, 2002