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Facility Survey
7366 Fall 2011

Computer Facilities Survey

School Networking Analysis (as modified from the "A Guide to Networking for K-12 Schools" (http://www.netc.org/network_guide/index.html), a project of the Washington State Office of the Superintendent of Public Instruction, prepared by the Northwest Educational Technology Consortium

Description of the School to Include

Number of students: **346**

Number of faculty and staff: **27**

Number/name of buildings (include grade levels housed in building): **Indian Trails Elementary School, Grades PK-4**

Number of LANs: **There is one LAN in the building**

Number of WANs/MANs: **The LAN is part of one district WAN**

Network Requirements/Services Provide details on how the following network services are used.

File sharing (the ability for more than one person to look at or modify a file): **File sharing is provided for students and staff through shared resource folders on the server. Shortcuts to the appropriate student shared folders are placed on the desktops of student computers in the computer lab and library to provide easy access. Students in grades 4 and below do not have individual log-ins.**

Applications sharing (programs stored on one computer and used by many people): **Several networked programs are installed and ran from the server for both faculty and students. These programs are available in the computer lab or through the networked computer in each classroom. Some web-based applications are also available for faculty use such as the online grade book and assessment system.**

Print sharing (sharing a printer or printers among many users): **Shared copiers/printers are housed in the main teacher workroom, the work room of the first and second grade wing, and the office. The computer lab has a shared printer for use by students and faculty in the lab.**

E-mail: **Email is available to staff for professional use. Email can be access through Microsoft Outlook at school, or through Outlook Web Access anywhere with internet access.**

Library system (complete library management or catalog system): **The library uses Destiny, which a Follett product that catalogs and tracks usage of the entire library collection. Destiny can be accessed through the 13 computers in the library, any computer on campus, or any computer with an internet connection. Teachers have the ability to log in to Destiny to reserve books or request books be sent to Indian Trails from other libraries in the district. Students do not have the ability to log in to Destiny until fifth grade. Any reservations or holds for students must be placed through the librarian.**

Information services/database sharing: **Administrators have access to student records through eSchool and teachers have access to some student information through the online gradebook. eSchool also interfaces with Destiny to keep library patron records current. Research databases are also available through Ebsco and Gale.**

Internet access (include information on whether service is dedicated or dial-up, speed of connection, name of ISP and what services they provide):

Dedicated internet access is provided through MOREnet. MOREnet provides domain name services, training, security services, SSL certificates, and access to databases through Ebsco Host, Gale, and other providers.

Remote access (access to the network from the outside, i.e., home):

Network administrators have limited VPN access. The public has access to library records through Destiny, access to webmail (Microsoft Outlook), and MOREnet resources can be accessed off campus with passwords provided to the staff.

Network security: **Fileshare securities and permissions protect specific folders on the servers. Updates and patches can be sent to computers across the network, and a password policy with 90 day expirations provide security to network resources and files.**

Remote management (manage the network from outside the school system):

VPN is available for network administrators, but most network diagnostics are conducted in person. Network administrators and tech support staff receive email notifications for maintenance routines.

Wide area networking method and speed (used to connect all schools within your district):

The internet backbone from MOREnet is 50Mbps, and the line from the main campus to Indian Trails is 1 GB fiber.

Filtering software installed (if none, you may still need to respond to the next statement dealing with filtering): Issues related to filtering that are perhaps being discussed and/or dealt with:

Lightspeed is used to filter internet access and scan email for potential threats at the district level. MOREnet also scans for SPAM and viruses in email providing a second layer of protection.

Other issues you've discovered:

Network Protocols

List each protocol and its use: **TCP/IP version 4**

Other issues you've discovered:

The school has a private network with an internal address scheme. The district uses Microsoft Active Directory to manage log in and user permissions.

File and Information Servers

Number, type (Windows NT-based, Apple-based, etc.), location, and use of each server.

Indian Trails has one server in the building. All other servers accessed by the building are on the main campus. It is possible that the server in the building will soon be moved to the main campus to facilitate maintenance of all servers in one physical location.

Added CD-ROM towers (may be attached to main file server or dedicated CD-ROM server): **The building does not contain any networked CD-ROM towers.**

Other issues you've discovered:

Client Computer Technology

What type(s) of computers do you currently have and what types do you envision?

Computer type and quantities: **Dell computers running XP to Windows 7.**
Existing : **Mostly Windows XP**
Planned : **Windows 7**

Printer type and quantities: **Minolta copier/printer, HP laserjets**
Existing: **2 Minolta copier/printers, 2 HP Laserjets (1 in the computer lab, 1 in the principal's office)**
Planned: **The Minolta copier/printers are brand new this school year. They will be replaced when their lease agreement has expired.**

Computer placement: What are the philosophies concerning whether to put computers in classrooms and/or labs? How do your personal philosophies compare? **Each classroom has at least one teacher computer. Some classroom have a few student computers that are computes that have been replaced by newer computers and then offered to teachers for use in their rooms. The number of student computers in a room depends on space and teacher requests.**

I would like to see more mini-labs throughout the building, and even a second dedicated computer lab. We will be getting wireless access later this year, which will make mobile labs easier to manage. We do not have any mobile laptops or tablet computers, but I am hoping that will be the next technology purchase made by the building— especially after we have wireless access.

How are hardware specifications determined before requesting equipment bids? **Operating System requirements, Software requirements, network requirements and how the computers are used determine the required hardware capabilities.**

Other issues you've discovered:

Network Wiring

What type(s) of wiring (or wireless) connectivity is used for each LAN (fiber, coax, etc.):

Fiber cable is used between the main campus and Indian Trails. Fiber cable is used between the main switch closet at the other two secondary switch closets. Unshielded Twisted Pair cables are used for shorter data runs to individual computers. Wireless access is slated to be available later this school year.

Number of classrooms: **16**
Number of networked computers in classrooms: **1 teacher computer and student computers based on teacher requests. There is not set amount of student computers per classroom. Most classrooms have just the teacher computer as the computers available for student use are slow and take up extra space in the classroom.**

Number of printers (networked and non-networked) in classrooms: **There are no networked printers in classrooms.**

Number of offices: **14 offices**

Number of computers in offices: **16 (2 in the reception office and 2 in the nurses office)**

Number of computer labs: **1 dedicated computer lab, 1 mini-lab in the library**
Number of networked computers per lab: **28 in the dedicated lab, 12 in the library**
Number of printers (networked and non-networked) per lab: **1 HP Laserjet in the dedicated lab**

Number of networked computers in "other" locations: **1 in the lunch room,**

Number of networked printers in "other" locations: **1 in the principal's office, 1 copier/printer in the main workroom, 1 copier/printer in the 1st/2nd grade wing workroom, 1 copier/printer in the main office workroom.**

Number of non-networked computers: **There are no non-networked computers in the building.**

Average number of data jacks per classroom: **4 per classroom**
Average number of data jacks per computer lab: **28 in the dedicated lab, 12 in the library lab**

Number of wiring closets and type of equipment contained in each (you should actually visit these closets for a real "eye opener"): **There are 3 switch closets in the building. The main closet contains six CISCO network switches, a server, an UPS that protects the entire network and IP phone system, and the amplifier for the intercom and PA system. All networking equipment in the building is CISCO.**

Other issues you've discovered: Indian Trails was built three years ago, thus the networking capabilities were built into the building rather than retrofitted into an older, existing building. Due to this, everything has ample space, there is not conduit hiding network cables across walls, and it has not been necessary to reallocate space to network needs. Also, the building was wired to support the electrical needs of the technology. I am surprised that a second computer lab was not included in the building, but perhaps they were anticipating wireless labs in the near future.

User Information

For one of the servers you've listed, how many users typically "log on" to it at one time? Is there a maximum number of connections?

There is no maximum login setting. Students and teachers from across the district can log in simultaneously without being denied access to the network.

At what times are users allowed to use network (only during school days or weekends, too)? At what times can they plan on help of support staff?

On-campus access is continuous and only limited by access into district buildings. Off-campus access to email, Destiny (library catalog), and online databases (Gale, Ebsco, etc.) is continuously available.

Other issues you've discovered:

Training

In what areas is training provided (i.e., data security, file management, network basics, word processing, special software, etc.)?

Training in basic network operations, including email, is provided for new teachers to the district during the first few days of new-teacher inservice offered at the beginning of each school year. Other training is provided as needed by fellow teachers at the building level. This training usually occurs as needed and results when a faculty member needing help seeks out someone else to help them or answer their question.

Other issues you've discovered:

Continuing or follow-up training for network operations is not centrally provided and is often pushed aside for other Professional Development needs.

Support

How is onsite support of the network (LANs and WAN) and network equipment provided?

The district has one network administrator and multiple technology support persons who are assigned to individual buildings quarterly. Each quarter, they are reassigned to new buildings so that they are familiar with the entire district's technology needs and configuration.

Other issues you've discovered: Work orders are completed in a timely manner.

Emergency Planning

Data storage backup systems: **Tape and Disc backups are performed on the main campus for all servers across the district.**

UPS (uninterrupted power supply) system: **The network switches, hubs, IP phones, and POE switches (power over internet) are protected by one UPS in the main switch closet at Indian Trails.**

Human resources available: **District Technology Staff**

Outside resources available: **MOREnet, AOS, fiber provider**

Service contract(s): **There are contracts with the fiber provider, MOREnet, and AOS for emergency needs or when the immediate needs overwhelm existing district support.**

Other issues you've discovered:

Physical Locations

What physical accommodations (electrical needs, air conditioning, etc.) had to be made before (or after) the network wiring and computer hardware was installed?

The switch closets are climate controlled for temperature and humidity.

Other issues you've discovered: