

**Douglass High School- School Network
MEDT 7477 Barry Thibault**

The Douglass High School Technology Specialist and Media Specialist were not helpful at all with allowing me to discuss the network layout plan. I had to do some searches from the School System to find any of the following information on my own. At first, I was quite upset but it actually gave me an opportunity to become more familiar with setting up networks in a home and school environment. I work in the separate auditorium building and was able to access the IDF located in a closet. This access taught me much about the layout and design of the complicated system as I was able to take some pictures and see firsthand how they are all networked together for our school's use.

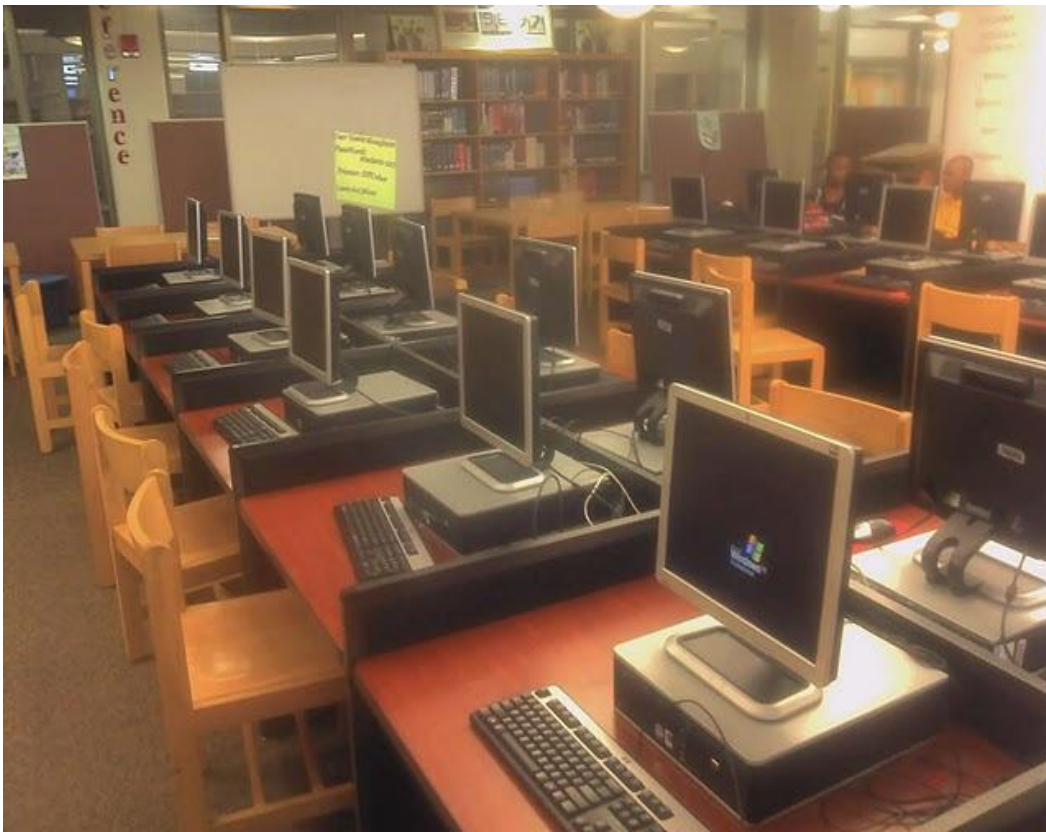
Douglass High School operates under the Atlanta Public Schools (APS) system in Atlanta, Georgia. Recently, the district has switched over their entire network as they selected the company Education Networks of America, Inc. (ENA) to provide the managed wide area network (WAN) data connectivity services for our school and district sites. The district's request for proposal issued in the fall of last year required all service providers to have demonstrable experience in providing WAN services to urban school districts, offer the best value for the district's requirements while maximizing the federal E-Rate program that provides subsidized discounts to schools and libraries for the purchase of telecommunication and networking services. The three-year contract began this July 1, 2011.

Under this new contract, ENA will ensure high-speed, reliable broadband connectivity between all district sites and the central office. The architecture of the new WAN service from ENA will

integrate and improve upon all of the district's current Metro Ethernet fiber circuits. As a managed service provider, ENA has not only provisioned and installed circuits and equipment for the enhanced service but will also maintain, support, monitor and troubleshoot the service for the life of the contract.

The Atlanta Public Schools Downtown Office maintains the entire districts' routers, firewalls, Internet blocking software and connectivity to the Internet which is all connected (networked) through fiber optic cables which connects the district's fiber switch in the main MDF to the schools' MDF as described. The Douglass MDF is connected to the eight IDFs via fiber optics and then connected to the patch panels in one of the eight IDFs. These patch panels are connected to the wall ports and the Ethernet cables are connected from the classroom wall ports to the client computers, labs and/or peripherals. The school has approximately twenty wireless access points running wireless 802.11g. These access points are located throughout the entire school including all separate buildings through ceiling access points. All teacher laptops and student mobile devices, including cell phones can connect to the network via these wireless access points.

The Douglass High School Media Center houses the following lab network setup: twenty-four student workstation clients, a network printer, 3 MAC laptop carts which circulate the school. These carts each house a LINKSYS 802.11g wireless router, which the teachers can use to connect to the WI-FI access throughout the school building.



The media center closet also houses the main client-server network with a mixed topology. The network contains one main distribution frame (MDF) found on the first floor in a closet near the Media Center which is connected to the Atlanta Public Schools Office Mainframe in Downtown, Atlanta. The Douglass MDF is connected to eight intermediate distribution frames (IDF). The main school building has 3 floors and there are 2 Intermediate Distribution Frames on each floor. The last 2 IDFs are located in separate buildings from the main. The Douglass Gymnasium and Auditorium (see pictures) house the last 2 IDFs. Each MDF and IDF contains Layer 3 Fast Ethernet switches and patch panels to network with the classes.



The School MDF and IDF utilizes the Cat 5 Ethernet protocol and contains two servers running the *Microsoft Windows 2003 Server* that actually make up the total network. The Douglass Network includes the two servers, a server backup, approximately 450-500 classroom workstations including 3 labs (one on each floor), classroom HP thin clients and approximately 100 peripherals, scanners and printers that connect to the network via Cat 5 Ethernet cable on a 100MB switched connection.


The school network system utilizes the following software:



Lawson Software is the enterprise application used for to manage our district's business operations including:

1. Personnel Administration
2. Payroll
3. Budgeting and Accounting
4. Accounts Payable
5. Procurement
6. Warehouse Operations

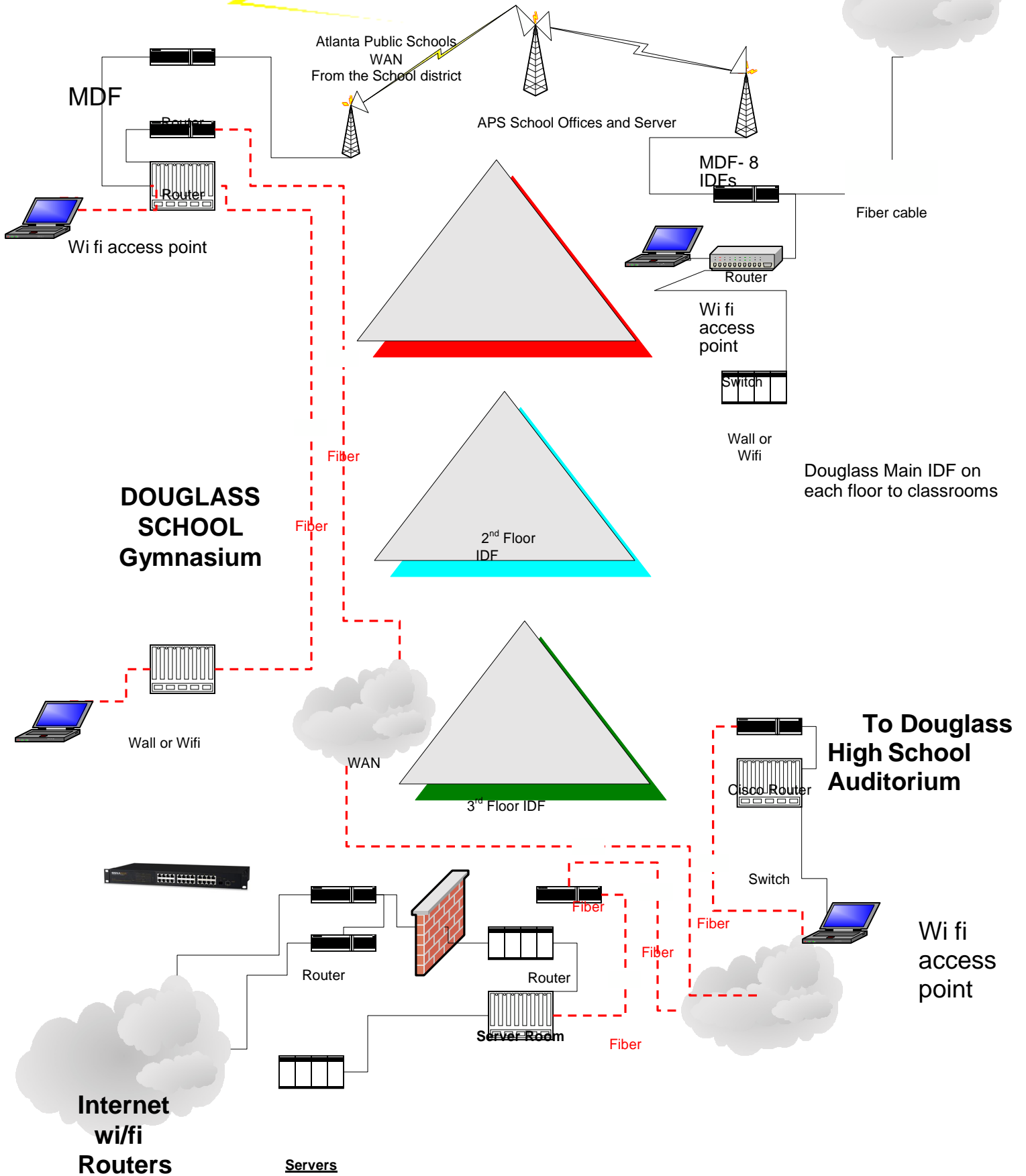
School Nutrition Services

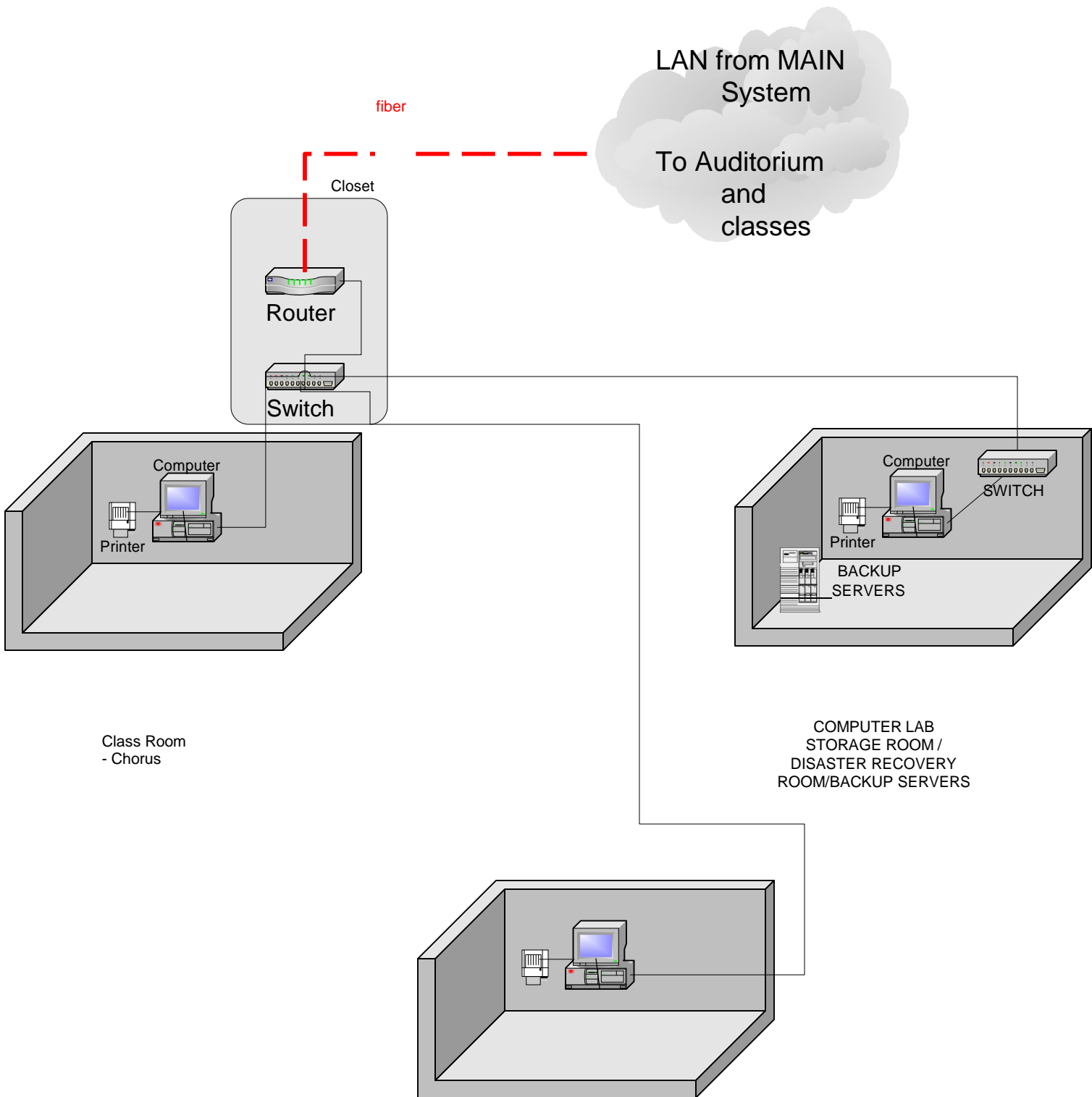
 Horizon Software manages the School Nutrition program including student free/reduced lunch eligibility and purchases. The software also facilitates meal planning and inventory management for our Cafeteria Managers. The student data in Horizon is automatically transferred from our student information system.

INsight is the district's instructional management system, designed to provide a comprehensive view of student data and performance indicators (demographic, achievement, and other) to support instruction in assessing

performance, analyzing trends, and differentiating instruction...to
maximize student achievement

DOUGLASS HIGH SCHOOL NETWORK DIAGRAM





Class Room – BAND and THEATER

