

Deciding Upon and Purchasing Computers for a K12 School District

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There is a process that should be used to decide upon and purchase schools for a K12 school district. The district first needs to identify the specific computer details for the ideal computer based upon the needs of the district. The details include quantity, case design, power supply, processor, ram, optical media, and other components that go into meeting the needs of the particular school district. Once it has been determined what the computer specifications will be, it is necessary for the district to identify which vendors the district will contact for quotes and contact those vendors in order to gather quotes based on the computer specifications of the school district. The quotes that are received then should be used to assist the district in determining which vendor will be selected. Once the computers are ordered and arrive at the school, there needs to be an implementation process in place to make sure the new computers are distributed throughout the district correctly.

Influences on Computer Specifications

When looking at purchasing new computers for a school district, it is important to look at who will use the computers and also what they will be used for. Determining who the computers will be used by will help determine what features will need to be included on the computers. Computers that are being purchased for use by students will likely have different specifications than computers that are being purchased for use by administration. The computers that are being looked at throughout this paper will be set up for use by students in the high school computer lab.

What the computers will be used for will likely have more affect on specifications than who the computers will be used by. The more sophisticated the programs that will be run on the computers, the higher quality the specifications must be. Also, the number of

programs that will be loaded on the computers will affect the specifications. For example, computers that will be used to run a suite such as Microsoft Office will not need to have the same requirements as those that will be used to run video editing software. The computers in the high school lab at the Lake Preston School District will need only to be able to run a small number of programs and also only need to be able to run the Microsoft Office Suite. No video editing or similar content is taught at Lake Preston so that cuts down on the high level of requirements for the new computers.

Specific Computer Details for the High School Lab at Lake Preston High School

The size of the lab that will be purchased will be twenty computers. This number was determined after looking at the class sizes for those grades that will be using the high school lab during the next 7 years. Ideally the computers will be replaced before seven years; however there is no guarantee of this so that is the time period that was looked at. The twenty computers that will be ordered will allow for at least 2 extra computers during the seven-year period based on current enrollment numbers.

The case design of the computers that will be purchased is important because of the size of the counter tops that are currently used in the high school lab. The computers that are being replaced were ordered with the counter top size taken into consideration. While these computers have cases that do not take up much room, the size of the case does limit when can be added onto the computer. The computers that will be purchased need to have a case size that fits into the layout of the computer lab yet also allow some flexibility in future decisions in adding to the specifications of the computers to be purchased.

The size of the counter tops in the computer lab also will affect the monitors that will be purchased. The lab currently has 17" monitors. While this does work, it tends to

contribute to the counter tops being cluttered on a regular basis. During the bidding process, vendors were asked to give quotes based on both 17" CRT monitors and also 15" flat panel monitors.

The size of the hard drive is not much of an issue for the computers that are being purchased for the high school computer lab. The reason for this is that all of the work done by the students is supposed to be saved directly on the server. This frees up the space on the individual computer hard drives. Bids for the high school computer lab at Lake Preston should be for computers with around 40GB of space on the hard drive. This should be sufficient room for the number and types of programs that will be loaded onto the computers.

Depending on the needs of the districts ordering the computers, the processor that is selected will vary in importance. The processor should operate at a speed that allows for all needed programs to operate sufficiently. Ideally, the computer that vendors will set up for use in the bids for the Lake Preston School District should have processors that are modern and will allow the users of the computers to perform the necessary tasks as proficiently as possible.

Another important specification to look at when purchasing computers for schools is the amount of RAM the computer comes with. With the increasing complexity of programs and operating systems that are being run, the amount of RAM computers need to run efficiently is increasing. The more RAM that is included with a computer the smoother everything will run. The computers that the Lake Preston School District were looking at should have at least 512MB of RAM.

The bids and quotes for the computers for the Lake Preston High School computer lab also are looking at the cost of a projector that will be used in the computer lab.

Probably the most important specification that one needs to look at is the lumens. It was determined that the projector purchased will be based the highest number of lumens that can be purchased at the most reasonable price. Ideally this projector will have at least 1200 lumens.

Specifics about the computers that vendors supplied bids for can be found in Appendix A. One of the bids was received by Connecting Point Computer Center/Ultra, Inc. from Watertown, SD. The other two bids that were used were taken from catalogs from CDW-G and Dell.

Finding Vendors and Getting Quotes

The process used by school districts to determine which vendors bids will be requested from will vary. School districts will most likely look at requesting bids from those companies with which they have had positive experiences in the past. Bids may be received in a variety of formats and ways. It is possible for school districts to simply use catalogs as a way of collecting bids for computers that they are going to purchase.

While it is possible to simply get quotes from catalogs, for most school districts it is not likely the way they go about getting bids. Most school districts are likely to communicate directly with computer companies or those companies with which they are able to have direct communication. This allows the school district to place specific requests for the computers on which they will be receiving bids.

The Lake Preston School District requested a bid from Connecting Point Computer Center/Ultra, Inc. from Watertown, SD. Going into the process, it was determined that unless the bid received from CPCC/Ultra, Inc. was extremely high, the computers would

be purchased through them. In order to compare prices, quotes were also taken from catalogs from CDW-G and Dell.

Based on the price quotes received and other information obtained, the decision would be to go with Connecting Point Computer Center/Ultra, Inc. The specifications provided in the bid from CPCC/Ultra, Inc. meet the needs of the computers that will be used in the high school lab at Lake Preston. Based on both price and space considerations, it was decided to go with the 15" flat panel monitors in the bid. This decision is not based solely on price alone. A large factor used in determining to go with CPCC/Ultra, Inc. is past experiences that I have had with this business. The Lake Preston School District has purchased several different technology devices from CPCC/Ultra, Inc. and have had nothing but positive experiences. Whenever we have had problems with equipment that we have purchased from CPCC/Ultra, Inc., they have promptly handled the situation. Based on location, it is easy for the school to take equipment that is having problems directly to CPCC/Ultra, Inc.

A breakdown of the bids and quotes received is included in Appendix B. The bid that was selected is shaded in the table. While no specifics are given about each individual computer, the table does give details on the total cost of the computers if they were purchased from the selected companies. Specifics about each company's computers can be found in Appendix A.

Implementation Process

The implementation process that will be used when the new computers arrive is one that will be beneficial to the school district and also easy to implement. The new computers were ordered to replace the computers that are currently in the high school

computer lab. The first thing that will need to be done even before the new computers arrive is to find new homes for the computers currently in the high school lab. These computers will be farmed out to other classrooms throughout the district. Teachers have put in request forms asking for one or more of the old lab computers to be placed in their classrooms. Based on the requests that are received, the computers will be divided up in an equal fashion. Four of the computers will be placed in the school library to help create a miniature lab setting.

Once the new computers arrive, they will need to be removed from their packages and set up in the high school computer lab. The layout of where the computers will be placed will be dictated by the layout of the lab itself. The district's technology coordinator will be in charge of making sure the operating systems are set up correctly and that all necessary software is loaded onto the machines. The technology coordinator will need to make sure that all of the new computers will be ready for student use by the beginning of the school year.

Summary

The process of purchasing computers for a school district is more than simply finding the cheapest computers. The person in charge of purchasing the computers needs to determine the required specifications of the computers based on the needs of the individual school district. Once the specifications have been determined, bids and quotes must be requested from businesses with whom the district feels comfortable doing business. Once the computers have been purchased and arrive, an implementation process should be in place to distribute the computers and assure that the computers will be ready for use.

**APPENDIX A:
BID AND QUOTE SPECIFICS BY COMPANY**

Page 9.....Connecting Point Computer Company/Ultra, Inc.
Page 11.....CDW-G
Page 12.....Dell

CONNECTING POINT COMPUTER COMPANY/ ULTRA, INC.



Dave Schmidt 06/07/04
Lake Preston School District
Lake Preston, SD



HP/Compaq DC5000 SFF

Intel Pentium 4 3.0E/800 w/HyperThreading Processor
40GB ATA/100 7200RPM Hard Drive
512MB PC3200 DIMM (2x256)
HP USB Optical Mouse
48X CD-ROM Drive
2004 Standard Keyboard PS/2
1.44MB Floppy Drive SFF
Country Kit dc5000/dx2000ST
Microsoft Windows XP Pro SP1a
Maple Restore CD License
Total Cost: \$697.00

Monitor

17" V7550 CRT Monitor
PN: P9013A
Cost: \$134.00

HP 15" Flat Panel Monitor L1502 2Tone
PN: P9617D
Cost: \$265.00

Installation &/or Training Proposed: **None Proposed**

Warranty Information

All warranties are per the manufacturer's stated warranty. No additional warranties are implied by Connecting Point Computer Center. A few of the important items concerning most manufacturer's warranties:

- *Manufacturer's warranties cover actual hardware failures only.
- *Software is NOT covered by any manufacturer's warranty.
- *Software troubleshooting and/or reinstallation is NOT covered by any manufacturer's warranty
- *On-Site warranties cover only a 60 mile radius of Watertown, SD-Outside 60 mile radius \$1.00 per additional mile.
- *Services not covered by manufacturer's warranties are billed at normal service rates.

The **backup**, transfer and/or reinstallation of data and applications is the responsibility of the customer. Ultra, Inc./Connecting Point Computer Center can provide these services, but they are not covered by the manufacturer's warranty and will be billed at our normal service rates. Ultra, Inc./Connecting Point Computer Center or its suppliers will not be held liable for any lost data. All warranties are per the manufacturer's standard warranty policies. No other warranties are implied or stated. Defective software will be replaced by Ultra, Inc./Connecting Point Computer Center for a period of 30 days. Defective replacements after 30 days are to be done directly with the software company.

Returns Policy

We would like to provide you with the best customer service possible. As part of our commitment to you in this area, it is important you are aware of our return policies and procedures. They break down as follows:
DOA Product (Product that fails out of the box within 24 hrs of DELIVERY from Ultra, Inc./Connecting Point Computer Center.) These products will be repaired or replaced with the same product at Ultra, Inc./Connecting Point Computer Center's discretion. All special order products for a client are not returnable. These items are clearly noted on this quote/proposal and also on your sales order. Client assumes all responsibility for compatibility, performance, and overall product functionality. Client assumes liability at the time the order is placed.
Unopened products that are NOT special order items can be returned within two weeks from date of purchase. Products unopened and returned after this period will be charged a 15% restocking fee. Opened products that are less than 2 weeks old will be returned on a per case basis and fees may apply depending on condition or type of product.
All Returned Products must be in original box, have all original packing materials, accessories, cables, etc. (like new condition) Products authorized for return that are not in this condition may be rejected upon receipt, or the client will be billed for the missing items and all labor required to get the product back into saleable condition

Payment Terms and Conditions

Payment is due in full upon delivery or completion of installation unless other arrangements have been made in advance of the sale. Leasing options are available upon request.

David Lewis

David Lewis
Education Rep
Connecting Point Computer Center/Ultra, Inc.

Accepted by _____
Dave Schmidt
Technology Coordinator
Lake Preston School District

InFocus®

InFocus® X2 1500 ANSI lumens SVGA projector

► DLP™ technology ► Contrast ratio: 2000:1 ► Dimensions: 9.8" (W) x 4.2" (H) x 12.5" (D)
 ► Weight: 6.8 lbs. ► Automatic deinterlacing for smooth, true-to-life images ► 1-year limited parts and labor, 90-day lamp warranty

\$999.00 CDWG 598769

InFocus LP540 1700 ANSI lumens XGA projector

► 3 x 0.79" polysilicon TFT LCDs ► Contrast ratio: 400:1 ► Dimensions: 11.6" (W) x 4.1" (H) x 10.3" (D) ► Weight: 7.5 lbs. ► 2-year limited parts and labor, 90-day lamp warranty

\$1999.00 CDWG 570584

InFocus LP120 1000 ANSI lumens XGA projector

► DLP technology ► Contrast ratio: 2000:1 ► Dimensions: 9.7" (W) x 2" (H) x 3.6" (D)
 ► Weight: 1.98 lbs. ► 2-year limited parts and labor, 90-day lamp warranty

\$2699.00 CDWG 494395

InFocus LP820 3000 ANSI lumens XGA projector

► 3 x 0.99" polysilicon TFT LCDs ► Contrast ratio: 800:1 ► Digital keystone correction
 ► Dimensions: 13.1" (W) x 4.3" (H) x 15.6" (D) ► Weight: 13.1 lbs. ► 2-year limited parts and labor, 90-day lamp warranty

\$4199.00 CDWG 494396



New models
Starting at \$379.00
 CDWG 594531



Available on select models

Monitor sold separately



Lease it with CDW+G™

Designed to deliver industry-leading value

hp compaq business desktop d220 series

Microtower computers

The HP Compaq Business Desktop d220 series features Intel® Pentium® 4 or Celeron® processors and offers three PCI expansion slots, two double data rate (DDR) memory slots and five drive bays in a compact, microtower platform, allowing for expansion or future upgrades. The HP Compaq Business Desktop d220 series is built around mature and proven Intel chipsets and processors to guarantee reliable performance and dependability.

Fit your computing needs

hp compaq business desktop dc5000 series

Small form factor and microtower computers

The HP Compaq Business Desktop dc5000 series small form factor has mainstream features and flexibility with all the benefits of a full-size, feature-packed desktop. It's approximately two-thirds the size of a conventional desktop, yet delivers the performance you need for a wide range of needs. The HP Compaq Business Desktop dc5000 series microtower has the same mainstream features combined with strong performance and the expandability and flexibility to meet a wide range of computing requirements.

hp compaq business desktop d220

Processor	Memory	Hard drive	CD-ROM	Ethernet	OS	Price	CDWG
2.4GHz Celeron	128MB	40GB	48X Max.	10/100	Windows XP Home	\$379.00	594531
2.4GHz Celeron	256MB	40GB	48X Max.	10/100	Windows XP Pro	\$497.75	594533
2.8GHz Pentium 4	128MB	40GB	48X Max.	10/100	Windows XP Home	\$497.75	594535
2.8GHz Pentium 4	256MB	40GB	48X Max.	10/100	Windows XP Pro	\$609.00	594538

hp compaq business desktop dc5000

Small form factor							
Processor	Memory	Hard drive	Multimedia	Ethernet	OS	Price	CDWG
2.66GHz Pentium 4	128MB	40GB	48X Max. CD-ROM	10/100/1000	Windows XP Pro	\$667.33	596382
2.8GHz Pentium 4 ¹	256MB	40GB	48X Max. CD-ROM	10/100/1000	Windows XP Pro	\$747.13	596384
2.8GHz Pentium 4 ¹	512MB	80GB	CD-RW	10/100/1000	Windows XP Pro	\$836.90	596388
Microtower							
2.8GHz Pentium 4 ¹	256MB	40GB	48X Max. CD-ROM	10/100/1000	Windows XP Pro	\$757.10	596387
2.8GHz Pentium 4 ¹	512MB	80GB	CD-RW	10/100/1000	Windows XP Pro	\$846.88	596389

¹With Intel Hyper-Threading Technology

DELL



Dimension 4600C

Exceptional Performance
Desktop. Compact Design

\$799


Monitor not included.

 **E-VALUE™ CODE 64984-S50607q**

Lease as low as **\$22/Mo.** (48-Pmts.)⁹⁸

Intel® Pentium® 4 Processor with HT
Technology at 2.80GHz with 800MHz
Front Side Bus

Microsoft® Windows® XP Home Edition

 Microsoft Office Basic Edition
2003 (Save \$100)

256MB Dual-Channel shared⁴¹
DDR SDRAM

80GB (7200 RPM) Ultra ATA/100
Hard Drive

8x DVD-ROM

Integrated Intel Extreme Graphics⁴¹ 2

Integrated Intel PRO 10/100 Ethernet

Small Form Factor Chassis

1-Year Limited Warranty;¹
1-Year On-Site Service²

RECOMMENDED UPGRADES

 **FREE** Upgrade to 15" E152FP
Flat-Panel for the Price of 17"
(16.0 VIS) E773 CRT Monitor
Add **\$100** (Save \$200)

3-Year Business Standard Service Plan –
was ~~\$203~~ now **\$148** (After \$55 Mail-In
Rebate) See pg 4 for rebate details



\$1699

Lease as low as **\$45/Mo.** (48-Pmts.)⁹⁸
SKU 3300MP2

Dell 3300MP Projector

3.9 lbs.

1500 ANSI lumens** (max.)

1700:1 contrast ratio

Native XGA (1024 x 768) resolution with
Auto-Sync to UXGA

Supports S, Composite, Component and
HDTV inputs

Standard 2-Year Advanced Exchange
Service⁹⁸

****Based on ANSI/NAPM IT7-228-1997 tests of 15 units, January 2004, with average ANSI Lumens 1523. Bulb brightness degrades with usage. Dell recommends replacing your bulb after 3000 hours of usage (up to 5000 hours in Eco-mode).**

**APPENDIX B:
TOTAL BID AND QUOTE COSTS BY COMPANY**

Page 14.....Cost By Company Chart

Vendor	Quantity	Item	Unit Cost	Cost
Ultra	20	HP/Compaq Computer	\$697.00	\$13,940.00
Ultra	20	17" CRT Monitor	\$134.00	\$2,680.00
Ultra	1	Projector	\$1,078.00	\$1,078.00
		Total for lab		\$17,698.00
Ultra	20	HP/Compaq Computer	\$697.00	\$13,940.00
Ultra	20	15" Flat Panel Monitor	\$265.00	\$5,300.00
Ultra	1	Projector	\$1,078.00	\$1,078.00
		Total for lab		\$20,318.00
CDWG	20	HP Computer	\$747.00	\$14,940.00
CDWG	20	Monitor	\$115.70	\$2,314.00
CDWG	1	Projector	\$999.00	\$999.00
		Total for Lab		\$18,253.00
CDWG	20	HP Computer	\$747.00	\$14,940.00
CDWG	20	15" Flat Panel Monitor	\$367.00	\$7,340.00
	1	Projector	\$999.00	\$999.00
				\$29,620.00
Dell	20	Dell	\$799.00	\$15,980.00
Dell	20	17" Monitor	\$100.00	\$2,000.00
Dell	1	Projector	\$1,699.00	\$1,699.00
				\$19,679.00
Dell	20	Dell	\$799.00	\$15,980.00
Dell	20	15" Flat Panel Monitor	\$100.00	\$2,000.00
Dell	1	Projector	\$1,699.00	\$1,699.00
				\$19,679.00