

**4d. Monitoring Process**

Individual(s) Responsible	Responsibilities
Director of Instructional Services/ District Technology TOSA	<ul style="list-style-type: none"> <li>• update the training schedule and the Professional Development Plan annually</li> <li>• ensure TLTs deliver training</li> <li>• oversee CTAP<sup>2</sup> survey completion</li> <li>• monitoring of staff proficiencies in technology skills via CTAP<sup>2</sup> results</li> </ul>
Site Administrators	<ul style="list-style-type: none"> <li>• collect and compile data annually regarding growth towards benchmark attainment</li> <li>• monitoring of staff proficiencies in technology skills via CTAP<sup>2</sup> results</li> <li>• monitoring of teacher integration of technology, via observations and student work</li> </ul>

**5. INFRASTRUCTURE, HARDWARE, TECHNICAL SUPPORT, SOFTWARE COMPONENT**

**5a. Technology Needs**

A variety of hardware and software is needed in order to support the curriculum and professional development components of this plan. Technology will be placed at school sites according to elementary school implementation guidelines that support the Curriculum and Professional Development components most effectively (See Curriculum Component, section 3d for implementation guidelines).

**5a1. Hardware Needs**

The District wishes to decrease the ratio of students to MMIA computers in all elementary schools.

**Goal 9:** All EMCS D schools will decrease the ratio of students to MMIA computers.

Objective	Benchmarks				
	2003	2004	2005	2006	2007
9.1 By June 2007, there will be a minimum ratio of 10 students to 1 MMIA computer in grades K-3.	14:1	13:1	12:1	11:1	10:1
9.2 By June 2007, there will be a minimum ratio of 5 students to 1 MMIA computer in grades 4-8.	10:1	9:1	8:1	7:1	5:1

Schools	Student to Computer Ratios (MMIA Computers)		
	Standard	10:1 (K-3)	5:1 (4-8)
Byron Thompson Elementary (grades K-3)	Standard	10:1 (K-3)	5:1 (4-8)
	Need	16 computers	NA
Cherrylee Elementary (grades K-6)	Standard	10:1 (K-3)	5:1 (4-6)
	Need	Requirement Met	Requirement Met
Cleminson Elementary (grades K-6)	Standard	10:1 (K-3)	5:1 (4-6)
	Need	2 computers	21 computers
Columbia Elementary (grades K-8)	Standard	10:1 (K-3)	5:1 (4-8)
	Need	Requirement Met	54 computers
Cortada Elementary (grades K-6)	Standard	10:1 (K-3)	5:1 (4-6)
	Need	Requirement Met	Requirement Met
Durfee (grades 4-8)	Standard	10:1 (K-3)	5:1 (4-8)
	Need	NA	79 computers
Gidley (grades K-8)	Standard	10:1 (K-3)	5:1 (4-8)
	Need	Requirement Met	64 computers
LeGore Elementary (grades K-6)	Standard	10:1 (K-3)	5:1 (4-6)
	Need	14 computers	43 computers
Loma Elementary (grades K-6)	Standard	10:1 (K-3)	5:1 (4-6)
	Need	Requirement Met	8 computers
Mulhall Elementary (grades K-6)	Standard	10:1 (K-3)	5:1 (4-6)
	Need	Requirement Met	Requirement Met
New Lexington Elementary (grades K-6)	Standard	10:1 (K-3)	5:1 (4-6)
	Need	1 computers	27 computers
Norwood Elementary (grades K-6)	Standard	10:1 (K-3)	5:1 (4-6)
	Need	Requirement Met	Requirement Met
Potrero Elementary (grades K-8)	Standard	10:1 (K-3)	5:1 (4-8)
	Need	NA computers	52 computers
Rio Hondo Elementary (grades K-8)	Standard	10:1 (K-3)	5:1 (4-8)
	Need	Requirement Met	56 computers
Rio Vista Elementary (grades K-6)	Standard	10:1 (K-3)	5:1 (4-6)
	Need	Requirement Met	Requirement Met
Shirpsier Elementary (grades K-5)	Standard	10:1 (K-3)	5:1 (4-5)
	Need	Requirement Met	30 computers
Thompson OH (grades K-8)	Standard	10:1 (K-3)	5:1 (4-5)
	Need	Requirement Met	4 computers
Wilkerson Elementary (grades K-6)	Standard	10:1 (K-3)	5:1 (4-6)
	Need	Requirement Met	25 computers
Wright Elementary (grades K-8)	Standard	10:1 (K-3)	5:1 (4-8)
	Need	Requirement Met	42 computers

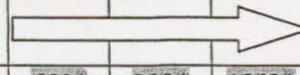
Teachers must be provided with a teacher station, to include a MMIA computer and access to a printer, to enable them to meet District goals for technology use to improve personal and professional productivity.

**Goal 10:** All EMCSD instructional classrooms will have a teacher station for professional use.

Objective	Benchmarks				
	2003	2004	2005	2006	2007
10.1 By June 2003, 100% of EMCSD instructional classrooms will provide a teacher MMIA computer.	100%				

In order to use computer technology for effective teaching and learning, peripherals must also be purchased. The District has determined a need for the following peripheral equipment:

**Goal 11:** All EMCSD instructional classrooms will be provided with an appropriate amount of peripherals.

Objective	Benchmarks				
	2003	2004	2005	2006	2007
11.1 By June 2004, 100% of EMCSD instructional classrooms will contain a TV.	50%	100%			
11.2 By June 2007, 100% of EMCSD instructional classrooms will contain a networked printer for student and teacher use.	20%	40%	60%	80%	100%
11.3 By June 2007, 100% of EMCSD instructional classrooms will contain a scan converter box.	10%	30%	50%	70%	100%

Schools	Peripherals (Standard: 1 per classroom)					
	Networkable Printer	Scan Converter Box	TV			
Byron Thompson (15 classrooms)	Need	Requirement Met	Need	15	Need	3
Cherrylee (28 classrooms)	Need	Requirement Met	Need	23	Need	4
Cleminson (17 classrooms)	Need	Requirement Met	Need	17	Need	Requirement Met
Columbia (50 classrooms)	Need	3	Need	50	Need	36
Cortada (31 classrooms)	Need	Requirement Met	Need	2	Need	3
Durfee (32 classrooms)	Need	Requirement Met	Need	29	Need	2
Gidley (32 classrooms)	Need	Requirement Met	Need	32	Need	Requirement Met
LeGore (32 classrooms)	Need	16	Need	32	Need	12
Loma (16 classrooms)	Need	Requirement Met	Need	16	Need	Requirement Met
Mulhall (22 classrooms)	Need	9	Need	22	Need	Requirement Met
New Lexington (22 classrooms)	Need	Requirement Met	Need	22	Need	1
Norwood (22 classrooms)	Need	Requirement Met	Need	16	Need	Requirement Met
Potrero (40 classrooms)	Need	Requirement Met	Need	15	Need	Requirement Met
Rio Hondo (43 classrooms)	Need	Requirement Met	Need	41	Need	1
Rio Vista ( classrooms)	Need	Requirement Met	Need	19	Need	Requirement Met
Shirpsier (33 classrooms)	Need	2	Need	32	Need	Requirement Met
Thompson OH (7 classrooms)	Need	Requirement Met	Need	7	Need	3
Wilkerson (33 classrooms)	Need	Requirement Met	Need	33	Need	Requirement Met
Wright (43 classrooms)	Need	Requirement Met	Need	41	Need	2

To ensure that students have access to technology outside of the classroom, the District has determined that all schools will provide at least one computer lab, containing a minimum of 35 MMIA computers.

**Goal 12:** All EMCS D schools will contain at least one computer lab for student and staff training use.

Objective	Benchmarks				
	2003	2004	2005	2006	2007
12.1 By June 2007, all schools will provide at least one lab, with possibilities to include stationary and/or mobile labs.	25%	35%	50%	75%	100%

Schools	Labs (stationary and/or mobile) (Standard: 1 lab with a minimum of 35 computers)	
Byron Thompson & Thompson OH	Need	35
Cherrylee	Need	17
Cleminson	Need	35
Columbia	Need	Requirement Met
Cortada	Need	2
Durfee	Need	35
Gidley	Need	10
LeGore	Need	35
Loma	Need	20
Mulhall	Need	Requirement Met
New Lexington	Need	35
Norwood	Need	14
Potrero	Need	5
Rio Hondo	Need	5
Rio Vista	Need	2
Shirpser	Need	35
Wilkerson	Need	3
Wright	Need	5

It has also been determined that all schools will be equipped with an advanced presentation station, to include an appropriate number of electronic white boards and LCD projectors. As of March 2002, all schools received one electronic white board. The electronic white board was designated for school-wide use; therefore, schools that service grades K-8 or 4-8 will need to determine what level it will be redesignated to.

**Goal 13:** All EMCS D schools will provide an appropriate number of advanced presentation stations, to include electronic white boards and LCD projectors.

Objective	Benchmarks				
	2003	2004	2005	2006	2007
13.1 By June 2004, each school that serves students in grades K-6 will provide one electronic white board.	70%	100%			
13.2 By June 2005, each school that serves students in grades K-6 will provide one LCD projector.	50%	75%	100%		

13.3 By June 2007, each school that serves students in grades K-8 will provide three electronic white boards, one for K-6 and one each for grades 7-8.		25%	50%	75%	100%
13.4 By June 2007, each school that serves students in grades K-8 or 4-8 will provide three LCD projectors, one for K-6 and one each for grades 7-8.		25%	50%	75%	100%

Schools	Presentation Station (Standard: 1 each K-6, 2 each 7-8)	
Byron Thompson & Thompson OH (grades K-3)	Need	Electronic White Board: 1 LCD projector: 1
Cherrylee (grades K-6)	Need	Electronic White Board: Requirement Met LCD projector: Requirement Met
Cleminson (grades K-6)	Need	Electronic White Board: Requirement Met LCD projector: Requirement Met
Columbia (grades K-8)	Need	Electronic White Board: 2 LCD projector: 2
Cortada (grades K-6)	Need	Electronic White Board: Requirement Met LCD projector: Requirement Met
Durfee (grades 4-8)	Need	Electronic White Board: 2 LCD projector: 1
Gidley (grades K-8)	Need	Electronic White Board: 2 LCD projector: 2
LeGore (grades K-6)	Need	Electronic White Board: Requirement Met LCD projector: 1
Loma (grades K-6)	Need	Electronic White Board: Requirement Met LCD projector: Requirement Met
Mulhall (grades K-6)	Need	Electronic White Board: Requirement Met LCD projector: 1
New Lexington (grades K-6)	Need	Electronic White Board: Requirement Met LCD projector: Requirement Met
Norwood (grades K-6)	Need	Electronic White Board: Requirement Met LCD projector: Requirement Met
Potrero (grades K-8)	Need	Electronic White Board: 2 LCD projector: 1
Rio Hondo (grades K-8)	Need	Electronic White Board: 2 LCD projector: 3
Rio Vista (grades K-6)	Need	Electronic White Board: Requirement Met LCD projector: 1
Shirpser (grades K-5)	Need	Electronic White Board: Requirement Met LCD projector: Requirement Met
Wilkerson (grades K-6)	Need	Electronic White Board: Requirement Met LCD projector: Requirement Met
Wright (grades K-8)	Need	Electronic White Board: 2 LCD projector: 2

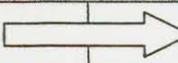
**5a2. Infrastructure Needs**

Since the District will be housing the new student information system, School Max, on a district server, all school site SASI servers will be available for conversion to application servers, creating additional server capacity.

In an attempt to create increased network speed and bandwidth, the District will be upgrading all MDF to IDF connections, from 10/100 megabit to 10/100/1000 megabit and installing caching engines at all school sites. As well, all classrooms standard drops will be increased from one to four.

**Goal 14:** All EMCS D school sites will be provided with the necessary infrastructure to support student academic achievement.

Objective
14.1 By December 2002, all school site SASI servers will be converted to application servers.
14.2 By December 2002, all school network infrastructure will be upgraded from 10/100 megabit to 10/100/1000 megabit, from the MDF to the IDFs.

Objective	Benchmarks				
	2003	2004	2005	2006	2007
14.3 By June 2005, each school site will have a caching engine housed in the MDF, via E-Rate.	25%	50%	100%		
14.4 By June 2007, all classrooms will have a standard of 4 drops, via E-Rate.	20%	40%	60%	80%	100%

**5a3. Hardware Specifications and Recommendations**

The following computer brands will be supported by the District’s Computer Operations department: Compaq, Hewlett Packard, IBM, and Apple.

**Specifications**

All new computer desktop and laptop purchases should have the following minimum specifications:

- IBM compatible computer desktop, tower, or notebook
- 600MHz and above processor
- 64 MB and above RAM
- 10 Gigabyte of Hard Drive and above
- CD-Rom with 24X + DVD support
- 1.44 MB Diskette Drive
- 10/100 MB network card built in
- Microsoft Windows 2000 or XP Professional
- Keyboard
- Mouse
- 15 inch monitor (12.1 inch for laptop screens)
- 3 years maintenance plan from manufacturer

**Macintosh systems**

iMAC or above

350MHz and above system

64 MB of RAM

5 Gigabyte of HD and above

10/100 network card

OS 9 and above

**Recommendation for PCs**

Compaq is recommended for desktops and Hewlett Packard is recommended for laptops (XE3 or Omnibook series).

**Network Cards for Desktop or Mini Tower computer**

Kingston 10/100 MB network card (this can be ordered through the district office)

**Notebook computer**

Xircom RealPort2 CardBus Ethernet 10/100 PC Card \$131

**Wireless Cards**

Orinoco IEEE Wireless PC Card (MFG: 848441556) \$90

**HUBs (Device used to connect more than one computer in a classroom)**

1-5 Computers 3Com 8 port Switch 3C16734B \$139.50

6-10 Computers 3Com 16 port Switch 3C16735B \$268.50

Data Cables come in lengths of 6, 10 and 15 feet. Specify the length when ordering.

*Note: Please contact the Computer Operations department prior to installing multiple computers in your classrooms, to ensure network resources are properly allocated.*

All of the above items can be ordered through Image Time. Send purchase order to Purchasing Department.

**5a4. Software Standards and Selection Process**

All newly purchased PCs come loaded with an industry standard office suite, as the District standard. Currently, the District standard is Microsoft Office 2000 or XP Professional. The standard anti-virus program housed on a district server is Trend Micro Office Scan.

Currently, there are no District standards for other electronic learning resources.

**Goal 15:** EMCS D will standardize on reading/language and math diagnostic remedial/reinforcement/enrichment software.

<b>Objective</b>
15.1 By September 2004, district standardized reading/language and math diagnostic remedial/reinforcement/enrichment software will be purchased and implemented.
<b>Benchmarks</b>
<b>Benchmark 1:</b> By October 2002, a Task Force will be created.
<b>Benchmark 2:</b> By June 2003, the Task Force will make recommendations for diagnostic reading/language and math software programs.
<b>Benchmark 3:</b> By September 2004, diagnostic reading/language and math software programs purchased and implemented.

In order to research and select appropriate learning tools, the District plans to use the California Learning Resource Network (CLRN) and the California Technology Assistance Program (CTAP) as resources for curriculum aligned technologies.

**5a5. Physical Plant Needs**

EMCS D has not done a formal assessment of electrical needs. It is evident that there is a need to upgrade the electrical capacity at most sites. As schools participate in modernization, electrical capacity issues will be addressed.

**Goal 16:** All EMCS D schools will have the power necessary to support the technology at their site.

Objective	Benchmarks				
	2003	2004	2005	2006	2007
16.1 By June 2007, all schools sites will provide enough power to support technology in all instructional areas.	10%	25%	50%	75%	100%

Back-up power capabilities exist for one hour in all MDFs and IDF s, including switches, hubs, routers, and file servers. The District would like to increase this length of time to 24 hours.

**Goal 17:** All MDFs and IDF s will have 24 hour back-up power supply systems.

Objective	Benchmarks				
	2003	2004	2005	2006	2007
17.1 By June 2007, all MDFs and IDF s will have 24 hour back-up power supply systems.	TBD	TBD	TBD	TBD	100%

Currently, all school site IDF s and MDF s are housed in locked cabinets. The Computer Operations department maintains all keys and access to the cabinets. No one at a school site has access to the cabinet without the presence of a Computer Operations representative. The Computer Operations department plans to continue with this type of security.

The District uses an electronic tagging system on all computer hardware for security purposes. Alarms are also active in all labs, offices, auditoriums, and kitchens. Some classrooms are alarmed. As schools participate in modernization, remaining classrooms will be equipped with alarms.

**5a6. Technical Support Needs**

Based on the curriculum and professional development components of this plan, the District expects:

- teachers to use technology for professional productivity and classroom instruction.
- administrators to use technology for school management, research, and analysis.
- students to use technology for communication, research, and personal productivity.

To effectively manage these expectations, the technology that exists must be reliable. Without timely technical support, teachers, administrators, and students will be hesitant to depend on technology and costly investments in computers and infrastructure will be underutilized.

The District has built its computer count to over 2,500 systems in the last two to three years with aggressive purchasing of computer hardware through technology grants. With this rapidly growing number of computers to service, the District will need to provide adequate technical support resources to meet the needs of teachers, administrators, and students. The District will support all Compaq, Hewlett Packard, IBM, and Apple computers that are not determined to be obsolete (See Funding and Budget Component, section 6d for Obsolete Replacement Policy).

**Goal 18:** All requests for district provided technical support will be handled in a timely manner.

**Objective**

**18.1** By June 2007, the District will provide one technical support person per 350 computers (1:350).

The District also intends to continue contracting with CEREC, L.P. for hardware support on an as needed basis.

**5a7. Technology Planning Needs**

The District believes that it is critical for individual school sites to plan their own technology implementation over the next five years.

**Goal 19:** All EMCS D schools will align their technology planning to the District Technology Use Plan.

**Objective**

**19.1** By June 2003, all school sites will update/create a Site Technology Use Plan aligned to the District Technology Use Plan. Plan to be updated annually.

**Implementation Plan**

Components of the site plans will include most of the materials generated through the goals and objectives for this district plan including, but not limited to:

- a breakdown of student performance measures,
- results based on the Matrix assessment criteria,
- a breakdown of access issues for special populations,
- a description on uses of technology to improve parent access to teachers and administrators,
- CTAP<sup>2</sup> results,

- Leadership Teams will incorporate technology training into Professional Development Plans,
- minimum computer ratios,
- an inventory of computers, peripherals, and software,
- a description of software resources used,
- a description of internal staffing for technical support and technology training,
- funding sources used to purchase and support technology, and
- schedules for evaluation, monitoring, and revisions of site level plans.

**5b. Existing Technology**

**5b1. Existing Infrastructure**

The following describes the existing infrastructure that will support the curriculum and professional development components of this plan.

Location	Infrastructure
<b>District</b>	<ul style="list-style-type: none"> <li>▪ Two T1 lines connect District to Pacbell Internet</li> <li>▪ Internet router contains a mail server, a proxy server, a web server, and an Internet filtering server</li> <li>▪ N2H2 (Bess) is the current web based Internet filtering software program</li> <li>▪ PBX Phone System connected to all schools, via district and site CSUs</li> <li>▪ Local LAN runs at 100 megabits per second</li> </ul>
<b>Schools</b>	<ul style="list-style-type: none"> <li>▪ Router connects to the District Office router, via one T1 data line at 1.5 megabits per second</li> <li>▪ Phone system connects to the District Office phone system, PBX, via one T1 phone line at 1.5 megabits per second</li> <li>▪ 1 MDF, houses the CSU, router, switch, SASI server, Application server, and a UPS</li> <li>▪ 100 megabit fiber connection to IDFs</li> <li>▪ 2-6 IDFs, house switch and a UPS</li> </ul>
<b>Classrooms</b>	<ul style="list-style-type: none"> <li>▪ CAT5 enhanced cable and fiber connections to the desktop</li> <li>▪ Standard of one drop</li> <li>▪ One eight port hub</li> </ul>

**5b2. Existing Hardware**

The following is a break down of each school sites' existing technologies that will support the curriculum and professional development components of this plan.

School Name	Hardware
Byron Thompson	K-3 MMIA computer ratio: 19.6:1 Lab: 0 MMIA computers Library: 2 MMIA computers Networked printers per classroom: 32 of 15 Teacher MMIA computer: 14 of 15 TVs: 12 of 15 Scan Converters: 0 of 15 Smart Boards: 1 of 1 LCD projectors: 1 of 1
Cherrylee	K-3 MMIA computer ratio: 7.1:1 4-6 MMIA computer ratio: 3.5:1 Lab/Library: 18 MMIA computers Networked printers per classroom: 28 of 28 Teacher MMIA computer: 28 of 28 TVs: 24 of 28 Scan Converters: 5 of 28 Smart Boards: 1 of 1 LCD projectors: 2 of 1
Cleminson	K-3 MMIA computer ratio: 11:1 4-6 MMIA computer ratio: 14.4:1 Lab: 0 MMIA computers Library: 1 MMIA computers Networked printers per classroom: 25 of 17 Teacher MMIA computer: 16 of 17 TVs: 17 of 17 Scan Converters: 0 of 17 Smart Boards: 1 of 1 LCD projectors: 1 of 1
Columbia	K-3 MMIA computer ratio: 4.9:1 4-8 MMIA computer ratio: 8:1 Lab: 45 MMIA computers Library: 2 MMIA computers Networked printers per classroom: 20 of 50 Teacher MMIA computer: 45 of 50 TVs: 14 of 50 Scan Converters: of 50 Smart Boards: 1 of 3 LCD projectors: 0 of 3

Cortada	<p>K-3 MMIA computer ratio: 6:1  4-6 MMIA computer ratio: 5.2:1  Lab: 33 MMIA computers  Library: 2 MMIA computers  Networked printers per classroom: 29 of 31  Teacher MMIA computer: 31 of 31  TVs: 28 of 31  Scan Converters: 29 of 31  Smart Boards: 1 of 1  LCD projectors: 1 of 1</p>
Durfee	<p>4-8 MMIA computer ratio: 12.6:1  Lab: 0 MMIA computers  Library: 3 MMIA computers  Networked printers per classroom: 40 of 32  Teacher MMIA computer: 25 of 32  TVs: 30 of 32  Scan Converters: 3 of 32  Smart Boards: 1 of 3  LCD projectors: 2 of 3</p>
Gidley	<p>K-3 MMIA computer ratio: 3.2:1  4-8 MMIA computer ratio: 11.7:1  Lab: 25 MMIA computers  Library: 4 MMIA computers  Networked printers per classroom: 25 of 32  Teacher MMIA computer: 28 of 32  TVs: 33 of 32  Scan Converters: 0 of 32  Smart Boards: 1 of 3  LCD projectors: 0 of 3</p>
LeGore	<p>K-3 MMIA computer ratio: 15:1  4-6 MMIA computer ratio: 17.6:1  Lab: 0 MMIA computers  Library: 6 MMIA computers  Networked printers per classroom: 12 of 32  Teacher MMIA computer: 30 of 32  TVs: 20 of 32  Scan Converters: 0 of 32  Smart Boards: 1 of 1  LCD projectors: 0 of 1</p>
Loma	<p>K-3 MMIA computer ratio: 8:1  4-6 MMIA computer ratio: 6.7:1  Lab: 15 MMIA computers  Library: 1 MMIA computers  Networked printers per classroom: 16 of 16  Teacher MMIA computer: 16 of 16  TVs: 16 of 16  Scan Converters: 0 of 16  Smart Boards: 1 of 1  LCD projectors: 1 of 1</p>

Mulhall	K-3 MMIA computer ratio: 5.3:1 4-6 MMIA computer ratio: 4.2:1 Lab: 35 MMIA computers Library: 1 MMIA computers Networked printers per classroom: 7 of 22 Teacher MMIA computer: 21 of 22 TVs: 22 of 22 Scan Converters: 0 of 22 Smart Boards: 1 of 1 LCD projectors: 0 of 1
New Lexington	K-3 MMIA computer ratio: 10.4:1 4-6 MMIA computer ratio: 14:1 Lab: 0 MMIA computers Library: 1 MMIA computers Networked printers per classroom: 23 of 22 Teacher MMIA computer: 21 of 22 TVs: 21 of 22 Scan Converters: 0 of 22 Smart Boards: 1 of 1 LCD projectors: 1 of 1
Norwood	K-3 MMIA computer ratio: 6.1:1 4-6 MMIA computer ratio: 3.6:1 Lab: 21 MMIA computers Library: 0 MMIA computers Networked printers per classroom: 24 of 22 Teacher MMIA computer: 22 of 22 TVs: 22 of 22 Scan Converters: 6 of 22 Smart Boards: 1 of 1 LCD projectors: 1 of 1
Potrero	K-3 MMIA computer ratio: 7:1 4-8 MMIA computer ratio: 9.6:1 Lab: 30 MMIA computers Library: 1 MMIA computers Networked printers per classroom: 40 of 40 Teacher MMIA computer: 35 of 40 TVs: 40 of 40 Scan Converters: 25 of 40 Smart Boards: 1 of 3 LCD projectors: 2 of 3

Rio Hondo	K-3 MMIA computer ratio: 6.9:1 4-8 MMIA computer ratio: 9.2:1 Lab: 30 MMIA computers Library: 0 MMIA computers Networked printers per classroom: 47 of 43 Teacher MMIA computer: 42 of 43 TVs: 42 of 43 Scan Converters: 2 of 43 Smart Boards: 1 of 3 LCD projectors: 1 of 3
Rio Vista	K-3 MMIA computer ratio: 5.2:1 4-6 MMIA computer ratio: 3.3:1 Lab: 33 MMIA computers Library: MMIA computers Networked printers per classroom: 21 of 21 Teacher MMIA computer: 21 of 21 TVs: 21 of 21 Scan Converters: 2 of 21 Smart Boards: 1 of 1 LCD projectors: 0 of 1
Shirpser	K-3 MMIA computer ratio: 9.4:1 4-5 MMIA computer ratio: 10.8:1 Lab: 0 MMIA computers Library: 1 MMIA computers Networked printers per classroom: 27 of 33 Teacher MMIA computer: 33 of 33 TVs: 33 of 33 Scan Converters: 1 of 33 Smart Boards: 1 of 1 LCD projectors: 1 of 1
Thompson OH	K-3 MMIA computer ratio: 4.5:1 4-8 MMIA computer ratio: 7.4:1 Lab: MMIA computers Library: 2 MMIA computers Networked printers per classroom: 35 of 7 Teacher MMIA computer: 7 of 7 TVs: 4 of 7 Scan Converters: 0 of 7 Smart Boards: Share with Byron Thompson LCD projectors: Share with Byron Thompson

<p>Wilkerson</p>	<p>K-3 MMIA computer ratio: 6.9:1                  4-6 MMIA computer ratio: 7.8:1                  Lab: 14 MMIA computers                  Library: 2 MMIA computers                  Networked printers per classroom: 24 of 33                  Teacher MMIA computer: 33 of 33                  TVs: 33 of 33                  Scan Converters: 0 of 33                  Smart Boards: 1 of 1                  LCD projectors: 0 of 1</p>
<p>Wright</p>	<p>K-3 MMIA computer ratio: 7.1:1                  4-8 MMIA computer ratio: 8.2:1                  Lab: 30 MMIA computers                  Library: 0 MMIA computers                  Networked printers per classroom: 78 of 43                  Teacher MMIA computer: 43 of 43                  TVs: 41 of 43                  Scan Converters: 2 of 43                  Smart Boards: 1 of 3                  LCD projectors: 1 of 3</p>

**Goal 20:** All EMCS D sites will annually update the technology inventories.

**Objective**

20.1 By September 2002, and in every succeeding year, complete inventories of each site will be completed/updated and attached as Appendix B.

**5b3. Existing Electronic Resources**

All computers are currently migrating to the District's standardized operating systems, Microsoft Office 2000 or XP Professional. Schools use a variety of electronic learning resources in ways that correspond to their curriculum goals and objectives.

Currently, there are no District standards for other electronic learning resources. However, schools do use a variety of courseware programs and diagnostic remediation/reinforcement/ and enrichment programs such as Accelerated Reader, ClassWorks, SRI, Orchard, Reading Counts, and Waterford. As of June 2002, 13 of 18 schools use Accelerated Reader and two use Accelerated Math.

In order to research and select appropriate learning tools, the District plans to use the California Learning Resource Network (CLRN) and the California Technology Assistance Program (CTAP) as resources for curriculum aligned technologies.

**5b4. Existing Technical Support**

The District's Computer Operations department is responsible for all technical support. The department employs four full-time personnel. The current staff consists of one Network Administrator and three Information Technology Specialists, one level one and two level II.

The Network Administrator is responsible for overseeing the smooth operation of the District's Local Area Network and Wide Area Network. The Network Administrator is also responsible for dispatching technicians to various locations across EMCS D, to troubleshoot and diagnose

problems from the desktop level to the network infrastructure level. The Information Technology Specialists assist school sites across the District with computer hardware repair, upgrades, installations, and maintenance.

Additionally, many sites have an "unofficial" person who attends to basic hardware and software troubleshooting. Most of these people have not received formal troubleshooting training and do not receive a stipend for their assistance. They are often the first point of contact at a school when a problem arises. If they are unable to fix the problem, Computer Operations is contacted via a work order. The problem gets assigned to a technician based on priority and skill set of the technician.

The District uses CEREC, L.P. for hardware support on an as needed basis. Schools utilize a variety of third party vendors.

**5c. Timeline**

The following chart, which continues on the next page, identifies action steps, persons responsible, and task completion deadlines for implementation.

Action Step	Person Responsible	Completion Date
Thorough inventories of each site completed/ updated (obj 20.1)	Site Administrators	9/02 annually
A Task Force will be created to research reading/ language and math diagnostic remedial/ reinforcement/ enrichment software programs (obj 15.1)	Instructional Services	10/02
All school site SASI servers converted to application servers (obj 14.1)	Computer Operations	12/02
All school networks upgraded from 10/100 megabit per second to 10/100/1000 megabit per second, from the MDF to the IDF's (obj 14.2)	Computer Operations	12/02
Task Force will make recommendations for diagnostic reading/language and math software programs (obj 15.1)	Instructional Services	6/03
All school sites update/ create a Site Technology Use Plan aligned to the District Technology Use Plan (obj 19.1)	Site Administrators	6/03 annually
Measure growth towards benchmark attainment	Computer Operations / Site Administrators	6/03 annually
Update inventories and schedule yearly cleaning/ maintenance	Computer Operations / Site Administrators	7/03 annually
Update tech plan to reflect changes/ additions in technology	District Technology Committee	8/03 annually
100% of EMCS D classrooms contain a TV (obj 11.1)	Site Administrators	6/04
Each school that serves students in grades K-6 provides one electronic white board. (obj 13.1)	Site Administrators	6/04
District standardized reading/ language and math diagnostic remedial/ reinforcement/ enrichment software purchased and implemented (obj 15.1)	Instructional Services	9/04

Each school that serves students in grades K-6 provides one LCD projector. (obj 13.2)	Site Administrators	6/05
Each school site has a caching engine housed in the MDF (obj 14.3)	Computer Operations	6/05
There is a minimum ratio of 10 students to 1 MMIA computer in grades K-3 (obj 9.1)	Site Administrators	6/07
There is a minimum ratio of 5 students to 1 MMIA computer in grades 4-8 (obj 9.2)	Site Administrators	6/07
100% of EMCSD classrooms provide a teacher station, to include a MMIA computer and access to a printer (obj 10.1)	Site Administrators/ Computer Operations	6/07
100% of EMCSD classrooms contain a networked printer (obj 11.2)	Site Administrators	6/07
100% of EMCSD classrooms contain a minimum of a scan converter box (obj 11.3)	Site Administrators	6/07
All schools provide at least one lab, with possibilities to include stationary and/ or mobile labs (obj 12.1)	Site Administrators	6/07
Each school that serves students in grades K-8 provides three electronic white boards, one for K-6 and one each for grades 7-8 (obj 13.3)	Site Administrators	6/07
Each school that serves students in grades K-8 provides three LCD projectors, one for K-6 and one each for grades 7-8 (obj 13.4)	Site Administrators	6/07
All classrooms have a standard of 4 drops per classroom (obj 14.4)	Computer Operations	6/07
All schools sites provide enough power to support computers in all instructional areas (obj 16.1)	Computer Operations	6/07
All MDFs and IDFs have 24 hour back-up power supply systems (obj 17.1)	Computer Operations	6/07
The District provides one technical support person per 350 computers (obj 18.1)	Computer Operations	6/07

**5d. Monitoring Process**

Individual(s) Responsible	Responsibilities
Computer Operations	<ul style="list-style-type: none"> <li>• review plan progress bi-annually to ensure goals are met</li> <li>• coordinate all district technology-based orders and purchases</li> <li>• identify plan modifications involving curricular issues</li> <li>• report on district inventory and installation activity</li> <li>• coordinate district technical support</li> <li>• install and maintain district technology/infrastructure</li> <li>• coordinate changes in district based technology infrastructure</li> </ul>
Instructional Services	<ul style="list-style-type: none"> <li>• review plan progress bi-annually to ensure goals are met</li> <li>• coordinate district purchase of diagnostic software programs</li> </ul>
Site Administrators	<ul style="list-style-type: none"> <li>• review plan progress bi-annually to ensure goals are met</li> <li>• coordinate all site technology-based orders and purchases</li> <li>• identify plan modifications involving curricular issues</li> <li>• report on site inventory and installation activity</li> <li>• coordinate site technical support</li> </ul>
District Technology Committee	<ul style="list-style-type: none"> <li>• provide annual progress report to school stakeholders</li> <li>• evaluate/ assess technology implementation, usage and progress</li> <li>• towards meeting yearly goals, objectives, and benchmarks</li> </ul>

**6. FUNDING AND BUDGET COMPONENT**

**6a. Funding Resources**

**6a1. Current and Potential Funding Sources**

EMCSD's on-going technology budget funds the following:

- Personnel in the Computer Operations department
- Administrative Systems
- E-Rate matching dollars

Current and potential funding sources include but are not limited to:

District Office	Individual School Sites
General Fund	School Site Improvement Funds
E-Rate	Categorical Funds (Title 1, EIA/LEP, GATE)
AB 75	Discretionary Funds
Grants	Grants (TLC)
Lottery Dollars	Governor's Performance Award
Partnerships	II/USP
	PTA
	Donations
	Partnerships
	Fund Raising
	Star Energy Saver Reimbursement

**6a2. Options for Reducing Cost**

Options for reducing costs include:

- hardware and software purchasing agreements,
- bundling purchases,
- C-SMART,
- CTAP,
- partnerships with industry experts,
- advertising potential purchases,
- leasing equipment, and
- integrating technology training into content professional development.

**6a3. Grants**

The District does not currently employ a full-time grant writer; however, grants are written by various district and site personnel. When needed, grant committees at school sites are formed. All grants must be Board approved prior to submission. The District has also utilized the services of outside consultants for large grant funding opportunities.

**6b. Implementation Costs**

EMCSD has made a decided effort to address the issue of Total Cost of Ownership (TCO). Currently, the District supplies funds for technical support, professional development, and the cost of replacement for site and district "standard issue" computers, which include all administrative computers and printers in offices.

School sites are responsible for repair or replacement of educational computers and hardware, additional professional development, and software packages. School sites allocate funds for TCO.

**6b1. Hardware, Infrastructure, and Electronic Learning Resources Cost Estimates**

The following chart breaks down estimated costs associated with any needed hardware, infrastructure upgrades, or electronic learning resources. \*\* Please note that all of these figures are estimates and will only be spent once funding becomes available.

Student Computer Hardware and Peripherals	Goal	Needed	Estimated Cost/Item	Estimated Total Cost
Classroom computers (K-3)	10:1	83	\$1,000	\$33,000
Classroom computers (4-8)	5:1	506	\$1,000	\$506,000
Labs	1 per school	290 computers	\$1,000 per computer	\$290,000
Printers	1 per classroom	30	\$250	\$7,500
TVs	1 per classroom	67	\$350	\$23,450
Scan Converter Boxes	1 per classroom	394	\$200	\$78,800
Electronic White Boards (K-6)	1 per school	0	\$4,500	
LCD Projectors (K-6)	1 per school	4	\$3,000	\$12,000
Electronic White Boards (7-8)	1 per grade level	12	\$4,500	\$54,000
LCD Projectors (7-8)	1 per grade level	10	\$3,000	\$30,000
Computer Furniture	As needed	TBD	~\$200	TBD
<b>Electronic Learning Resources</b>				
Software Licensing	All new computers loaded with Microsoft Office 2000 or XP Professional	As needed	\$62-\$65	TBD
Diagnostic Software Program	Standardized Reading/Language and Math programs	TBD	TBD	TBD
<b>Hardware Replacement Requirements</b>				
Computer replacement	As needed	TBD	\$1,000	TBD
Printer replacements	As needed	TBD	\$250	TBD
<b>Teacher and Administrator Computer Hardware</b>				
Teacher computer	1 per teacher	As needed	\$1,000	TBD
Administrative computer	As needed	TBD	\$1,500	TBD
Administrative printers	As needed	TBD	\$1,500	TBD
<b>Infrastructure Upgrades</b>				
School Networks	Upgrade	All sites	Dependent on E-Rate	TBD
Caching Engines	All sites	All sites	Dependent on E-Rate	TBD
Classroom drops	4 per classroom	All classrooms	\$350-\$500 per classroom	TBD
E-Rate Matching Funds	10% match	Ongoing	\$150,000	\$750,000

**6b2. Technical Support and Systems Maintenance Cost Estimates**

The following chart breaks down estimated costs associated with technical support and systems maintenance. \*\* Please note that all of these figures are estimates and will only be spent once funding becomes available.

Technical Support	Goal	Needed	Estimated Cost/Item	Estimated Total Cost
District Technicians	1 Technician per 350 computers	As needed	\$50,000/person/year	TBD
Network Administrator	1	NA	\$90,00 per year	\$450,000
Web Design Consulting		As needed	\$95 per hour	TBD
<b>Administrative Systems Maintenance</b>				
SIS (School Max)		Ongoing	\$15,840 per year	\$79,200
Financial System (Escape)		Ongoing	\$36,000 per year	\$180,000
Human Resources-LACOE		Ongoing	\$61,470 per year	\$307,350
Intranet/Internet		Ongoing	\$19,300 per year	\$96,500
Pulliam IDMS		Ongoing	\$35,112 per year	\$175,560

**6b3. Professional Development Cost Estimates**

The following chart breaks down estimated costs associated with professional development. \*\* Please note that all of these figures are estimates and will only be spent once funding becomes available.

Administrator/Support Staff Training	Goal	Needed	Estimated Cost/Item	Estimated Total Cost
AB75 Training	100%	Matching funds	\$1000 per administrator	\$25,000
<b>Teacher Training</b>				
Technology Lead Teachers (TLTs)	Training Inventories	18	TBD	TBD
Training Incentives (teacher stipends, etc.)	As needed	TBD	\$16.67 per hour	TBD
Consultant (Train-the-Trainer program)	Train TLTs	40 hours (5 days)	NA	\$15,000

**6b4. Technology Planning Cost Estimates**

The following chart breaks down estimated costs associated with technology planning. \*\* Please note that all of these figures are estimates and will only be spent once funding becomes available.

Planning (substitutes, stipends/extra duty pay)	Goal	Estimated Cost	Estimated Total Cost
Development of Matrix	TBD	\$110 per day per sub	TBD
Development of Staff Development Plan	TBD	\$110 per day per sub	TBD
Development of School Site Technology Plans	TBD	\$110 per day per sub or \$33.34 per hour per person for extra-duty pay	TBD
Updating of District Technology Plan	TBD	\$110 per day per sub	TBD

**6b5. Physical Plant Cost Estimates**

The following chart breaks down estimated costs associated with physical plants. \*\* Please note that all of these figures are estimates and will only be spent once funding becomes available.

Electricity	Goal	Needed	Estimated Cost
Electrical Upgrades	All needed	TBD	TBD
Back-up Power	24 hours	All sites	TBD
Wiring			
All instructional areas connected to the Internet	All classrooms	As needed	\$350-\$500 each

**6c. District Provided Technical Support**

The District considers reliable and timely technical support to be one of its highest priorities in its technology planning and will aggressively seek funding to provide an adequate level of support. As funding allows, the District's intent is to provide one technical support person per 350 computers by June 2007.

EMCSD will support all Compaq, Hewlett Packard, IBM, and Apple computers that are not determined to be obsolete (See Funding and Budget Component, section 6d for Obsolete Replacement Policy).

Through professional development programs for teachers on basic troubleshooting and the hiring of additional technicians, the District hopes to manage technical support so that all teachers and students can utilize technology effectively.

**6d. Obsolete Equipment Replacement Policy**

A comprehensive replacement cycle is currently being investigated and results will become the determining factor for obsolete software and equipment. Currently, end of life (EOL) is determined by usability and industry standards. If the Computer Operations department cannot obtain resources for said software and equipment through proper and expedient channels, the product will be determined to be obsolete. When equipment and software are determined obsolete, necessary support and maintenance will be at the school site expense. Redeployment of old or obsolete equipment will be determined by school site need based on past and current support records.

**6e. Monitoring Process**

Individual(s) Responsible	Responsibilities
Fiscal Services/ Purchasing	<ul style="list-style-type: none"> <li>review plan progress bi-annually to ensure goals are met</li> <li>oversee district budget and expenditures</li> <li>coordinate all district technology-based orders and purchases</li> </ul>
Site Administrators	<ul style="list-style-type: none"> <li>review plan progress bi-annually to ensure goals are met</li> <li>oversee site budget and expenditures</li> <li>coordinate all site technology-based orders and purchases</li> </ul>
District Technology Committee	<ul style="list-style-type: none"> <li>provide annual progress report to school stakeholders</li> <li>evaluate/ assess technology implementation, usage and progress towards meeting yearly goals, objectives, and benchmarks</li> </ul>

**7. MONITORING AND EVALUATION COMPONENT**

**7a. Evaluation of Curriculum Component**

Evaluation Instrument(s)	Data To Be Collected	Schedule for Evaluation	Program Analysis and Modification Process
API	% of schools who meet or exceed API growth targets	annually	Data to be collected by Student Support Services and presented to the District Technology Committee. This information will be used to update the Technology Plan and a progress report will be presented to all stakeholders.
SAT-9	% of students scoring at or above the 50 <sup>th</sup> percentile in reading, math, and language	annually	
STAR California Standards Test	% of students in grades 2-8 scoring proficient or above in reading, math, and writing	annually	
<ul style="list-style-type: none"> <li>▪ Lab Schedules</li> <li>▪ Class Schedules</li> <li>▪ Lesson Plans</li> </ul>	additional access special needs students have to technology	trimester	
Technology and Information Literacy Matrix	% of students who demonstrate grade level appropriate computer knowledge and skills and information literacy skills	annually	Data to be collected by Instructional Services and presented to the District Technology Committee. This information will be used to update the Technology Plan and a progress report will be presented to all stakeholders.
Printed Reports	Pullium IDMS fully implemented	annually	
IEPs	% of teachers utilizing the EPS software program	annually	Data to be collected by the Director of Special Education and presented to the District Technology Committee. This information will be used to update the Technology Plan and a progress report will be presented to all stakeholders.
Classroom webpages	% of teachers with classroom webpages	annually	Data to be collected by Site Administrators and presented to the District Technology Committee. This information will be used to update the Technology Plan and a progress report will be presented to all stakeholders.
Inventories	amount of hardware and software provided to students	annually	

**7b. Evaluation of Professional Development Component**

Evaluation Instrument(s)	Data To Be Collected	Schedule for Evaluation	Program Analysis and Modification Process
Staff development calendar	dates and offerings of staff development courses	annually	Data to be collected by Instructional Services and presented to the District Technology Committee. This information will be used to update the Technology Plan and a progress report will be presented to all stakeholders.
Attendance Logs	# of staff attending	bi-annually	
Teacher lesson plans and observations	integration of technology into the curriculum	bi-annually	
Trainee Evaluations	staff perceptions of training	bi-annually	
Trainer's Reports	trainer's perceptions of training	bi-annually	

**7c. Evaluation of Infrastructure, Hardware, Technical Support, and Software Component**

Evaluation Instrument(s)	Data To Be Collected	Schedule for Evaluation	Program Analysis and Modification Process
<ul style="list-style-type: none"> <li>▪ Inventories</li> <li>▪ POs</li> </ul>	amount of hardware and software purchased	annually	Data to be collected by Site Administrators, Computer Operations, and Purchasing and presented to the District Technology Committee. This information will be used to update the Technology Plan and a progress report will be presented to all stakeholders.
Network plans	infrastructure that exists and is installed/ upgraded	annually	Data to be collected by Computer Operations and Purchasing and presented to the District Technology Committee. This information will be used to update the Technology Plan and a progress report will be presented to all stakeholders.
Computer Operations work orders	amount of hardware and software installed/ maintained by technical support personnel	annually	Data to be collected by Computer Operations and presented to the District Technology Committee. This information will be used to update the Technology Plan and a progress report will be presented to all stakeholders.