

The Clarion School for Boys, Inc.— Milwaukee Division: Making Information Systems Investments

John Young, Controller of the Clarion School for Boys, Inc.—Milwaukee Division, hung up the telephone as the school bell signaled the end of another day's classes. Young's conversation with Sean McHardy, the Superintendent and Chief Operating Officer of Clarion—Milwaukee Division, was short and to the point. McHardy had called to confirm that Young would be prepared to present his assessment of the current information systems (IS) at Clarion and propose a direction for information systems at the organization for the next fiscal year at the quarterly Board of Directors meeting scheduled for next week (June 13, 2006) in Chicago.

As an MBA student, Young had learned about the importance of an overall information systems strategy. McHardy's request, however, required Young to formalize a full plan, complete with an assessment of the current situation as well as future projects and budgets. As Controller, Young knew that the members of the Board of Directors were anxious to hear how Clarion—Milwaukee's current investment in information technology was paying off. Since 1998, when the Board had approved a sizable investment in hardware and software, there had been little formal monitoring of the system's benefit.

Young had joined the Milwaukee Division of Clarion in November 2005. His previous job had been as assistant controller in one of the divisions of American Chemical Company (ACC) in Chicago; he had worked at ACC for 10 years after receiving his MBA in finance from a well-known Midwestern business school.

After 10 years, Young had tired of big companies and narrow jobs and decided to move into a position with broader responsibility. However, most of his days at Clarion—Milwaukee had been spent "fighting fires" rather than planning business strategy. Although his position was

quite different than he had expected, he felt the intangible rewards clearly surpassed those at American Chemical. Young had developed several good friends at Clarion—Milwaukee and enjoyed his daily routine.

The Clarion School for Boys, Inc.

The Clarion School for Boys, Inc., was founded in 1989 as "a refuge for wayward boys" by a group of investors from Chicago, all of whom had grown up in foster homes but accumulated considerable wealth during their lives. Their vision was to create an environment for boys who had got into trouble that would provide them with a diagnosis and treatment plan as well as the discipline and support needed to become productive members of society. They felt that they could operate these schools efficiently and make a small profit in the process. During the next 10 years, Clarion established a diverse program of care that relied on the dedication and devotion of this group of investors. The first school was opened near Chicago, Illinois, in 1991. Later, Clarion opened additional schools near Detroit, Michigan (1995); Indianapolis, Indiana (1998); and St. Louis, Missouri (2000).

The Milwaukee division was the second oldest school in the Clarion system, opened in 1993. It was housed on the grounds of a former monastery and contained several buildings and 80 acres of land on the edge of the city. As in other states, Clarion—Milwaukee Division depended somewhat on the parents for financial tuition. However, over 80 percent of the revenue came from per diem charges paid by government agencies for the housing and treatment of problem boys.

The Clarion School for Boys—Milwaukee Division was classified as a private, for-profit residential treatment facility for delinquent boys between the ages of 10 and 18. In 2006, there were 128 full- and part-time employees who provided care and treatment to 120 students. Of the 9 residential child-care facilities operating in Wisconsin, Clarion—Milwaukee was the second largest in terms of enrollment and the third most expensive in per diem

charges. Unlike Clarion—Milwaukee, most other child-care facilities were not designed to help children who were exhibiting severe behavioral problems. As a result, Clarion—Milwaukee often functioned as a “last resort” before a child was placed in a mental hospital or state correctional institution.

Clarion—Milwaukee’s ability to manage difficult cases was largely the result of its comprehensive treatment program. The treatment effort was supported by a faculty-managed school program along with modern crisis-management facilities and tracking devices. Since 1999, Clarion—Milwaukee’s strategy to differentiate itself from its competitors emphasized the importance of using modern information technology in combination with a caring staff attitude. Because the school typically dealt with potentially dangerous students, the ability to contact support staff and access student records quickly was considered essential to effective performance.

As operational expenses and capital requirements continued to rise, the Milwaukee school became more dependent on increased per diem charges and higher enrollments to balance the budget. During the 2005–2006 fiscal year (ending June 30, 2006), Clarion charged placement agencies or families \$150.50 per day for each student enrolled in the regular treatment program. For students enrolled in the ISIS program, a premium care/rehabilitation facility opened in 2001 for students whose next option was a juvenile delinquency institution, the charge was \$197.00 per day. Total per diem revenue for the 2005–2006 fiscal year was budgeted at \$4,891,000, but enrollment had been running well ahead of projections. As a result, there was considerable interest in expanding the school’s capacity in fiscal 2006–2007.

All capital expenditures were allocated from the Capital Assets Fund of Clarion, Inc. Each division competed with the other operations for access to this fund. Clarion—Milwaukee was proposing three major projects for fiscal year 2006–2007:

1. a major upgrade to the IBM AS/400 computing system and associated software, personal computers, and network,
2. the remodeling of a living unit to expand the ISIS program, and
3. the construction of a cottage that would accommodate 10 additional students for the regular program.

Young would have responsibility for managing each of these major capital projects. All capital projects exceeding \$25,000 had to be approved by the Board of Directors of Clarion, Inc. The Board was known for reviewing each capital request carefully.

Information Systems (IS) Planning

With labor costs representing 68 percent of the school’s operating budget, Young’s predecessor (Jacob Miller) considered computerization as one way to increase staff effectiveness and productivity in accessing information and to improve communications among the staff. Miller did not emphasize using automation to reduce cost directly (e.g., by reducing staff). On the recommendation of Miller in January 1998, the Clarion, Inc., Board of Directors approved the purchase of an IBM AS/400 computer and associated applications software.

Because Clarion, Inc., had many demands for its capital, Miller knew that capital expenditures for computers were considered difficult to justify, especially if the purchases were not connected directly to a new revenue stream. Nevertheless, members of the Board of Directors exhibited interest in the new information systems project even before the approval in 1998. As Miller began to describe the capabilities of the system in detail, the Board’s interest rose even further. Likewise, staff from all treatment programs and support areas expressed enthusiasm for the proposed benefits. Based mostly on the treatment staff’s support, the Board approved the project.

The stated objective of the hardware and software investment was to save staff time by using electronic communications, to accelerate routine tasks, and to provide easier, faster access to computerized student data. Critical functions at the time were considered to be electronic mail, student database access, analysis of the data held in the student database, and appointment/room scheduling. Applications software was purchased for each of these functions as well as support packages for accounting and human resources. The AS/400 system acquisition was supplemented by the purchase of 60 personal computers, replacing those that had been purchased from 1993 through 1997.

In order to synchronize implementation of the 1998 computer acquisition project with the needs of all departments, the Clarion Board of Directors had also approved a long-range organization plan for the Milwaukee Division. A joint effort between Board members and staff from all levels had led to the adoption of the division’s first five-year plan. This comprehensive plan focused on both administrative and treatment issues and was also approved in January 1998.

Clarion—Milwaukee’s Computer System

While no longer considered by some as state of the art, Clarion—Milwaukee’s computer network was custom-designed for its application needs in 1998. The distributed system was networked campuswide and linked the 60 IBM personal computers and attached laser printers. Each personal computer was provided with the latest version of

Microsoft Windows as well as the Microsoft Office applications software suite. According to the IBM sales representative, the network architecture allowed for 40 to 50 more personal computers to be added over time. Additional AS/400 computers could also be networked to provide peer-to-peer communications if more central computing power was needed at the school. No access to the Internet was allowed at the time due to concerns over providing students' access to potentially harmful material.

Because of severe budget constraints at Clarion from 2000 through 2004, no major upgrades to the AS/400 system were made. While all 60 personal computers were replaced in 2004 with the latest IBM desktops, the main system and its associated software remained the same as in 1998. Five IBM laptops were purchased for checkout by staff, and staff access to the Internet was allowed at that time.

The school's AS/400 computer was located in the front office building, where 14 personal computers were also located (see Exhibit 1). The primary system console—used for initial program loads and file backups by Jean Baker (the senior bookkeeper who worked for Young)—and the school's PBX unit (for the telephone system) were also located in the front office. The “white house,” where the offices of the Assistant to the Superintendent and the Controller were located, housed 10 of the 60 personal computers as well.

The education center contained all of Clarion—Milwaukee's classrooms and was by far the largest building on campus. Of the 60 total, 24 personal computers were available in a pool in the staff lounge of the center for teachers and the education supervisor, who also shared these systems with personnel who worked under the supervisor of services and other staff who worked in the east wing of the center.

The ISIS treatment program was located in Sherer Hall. Twelve personal computers were available in a community cubicle office environment for shared use by treatment and support staff. The Knight, Gibson, and Kunkler Hall dormitories (that could each house up to 45 students) were not equipped with computers, nor were the maintenance facilities. The proposed addition would place personal computers in each of the dormitories for student use, but still would not permit Internet access for fear that residents might access inappropriate materials.

Evaluating the Current System

After having the same system (except for new PCs) for over eight years, Young thought that the computing system should be formally evaluated. During his first staff meeting in November 2005, Young asked whether the administrative and treatment staff thought the current campuswide IS architecture was sufficient for Clarion. He also asked the group if they viewed the network as an advantage Clarion—Milwaukee had over other schools providing similar services.

In order to focus the discussion, Young asked, “What are your opinions of the system?” A sampling of the answers follows (the organizations these people belong to are described in Exhibit 2):

“We use e-mail to distribute weekly teaching plans to our aides.” (Teacher)

“We put the whole report card process on the system. Each teacher an input grades from a PC—it saves a lot of time since the cards don't have to go to each instructor individually.” (Education Supervisor)

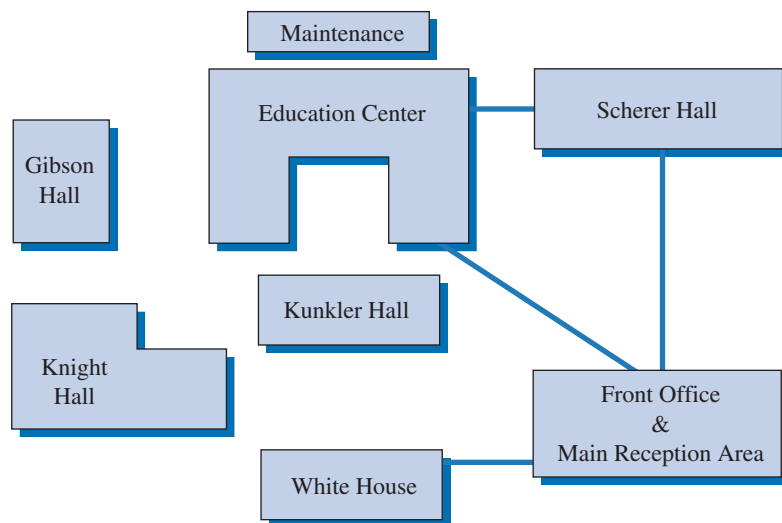


EXHIBIT 1 Campus Computing Network: The Clarion School for Boys, Inc.—Milwaukee Division

Social Services Department

The social services department is responsible for ensuring that those under care receive the appropriate clinical treatment. Because of the involvement of this department with the boys and their placing agencies as well as the wide variety of treatment options, access to the treatment files as well as e-mail, mail routing, and dictation is extremely important. The supervisor of social services functions as department head and is a member of the administrative council. She is also a member of the institutional treatment team.

Social services counselors handle direct counseling and casework functions, enter various progress data, and serve as members of the institutional treatment team and unit treatment teams. Most of the documents and reports that are the responsibility of the unit treatment teams require user data entry and report generation on the part of counselors.

Program Department

The program department is responsible for the group living environment as well as activities such as crisis intervention, recreation, and special events of the treatment program. Staff members in this department supervise part-time employees within their treatment area (child-care workers, recreation workers, and program aides). One lead program supervisor functions as the primary department head and needs access to computer treatment data and all other information resources. Seven associate program supervisors share direct supervisory responsibility for the child-care and recreation data.

Education Department

The education department is responsible for the operation of Clarion—Milwaukee's comprehensive year-round education program. Because the education department coordinates its activities with the program department, effective communication between these departments is critical. The education supervisor functions as the principal for the school. She is a member of the administrative council and the institutional treatment team. Within this department, 20 teachers provide instruction to the boys in a regular classroom environment. Some teachers have telephones while others do not. Most communication is through direct contact and written memos.

Transition Department

The transition department is responsible for the treatment and care of 20 boys enrolled in Clarion—Milwaukee's "transitional living" program. In most respects, the transition program is a separate treatment entity with its own supervisory, counseling, and care staff, but most supplementary functions are still performed by main campus personnel. The transition supervisor serves as the department head and is on the institutional treatment team and the administrative council.

ISIS Department

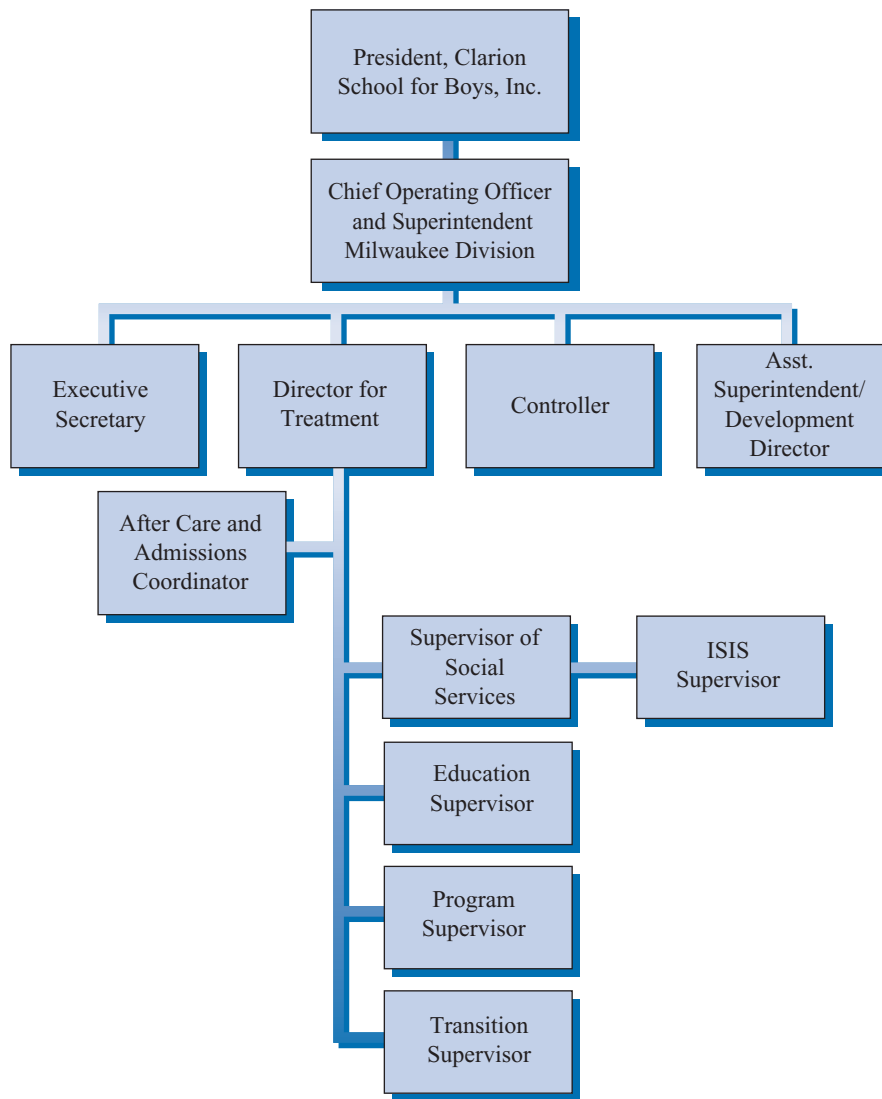
The ISIS department was created in response to the development of the ISIS rehabilitation program. The ISIS department reports to the supervisor of social services but has its own program supervisor. ISIS social service counselors perform some of the same functions as their counterparts in the regular program. Certain treatment needs require computer access to specialized treatment data.

Development Department

The development department is responsible for all human resource issues and a variety of other tasks, including the fund-raising efforts and public relations of Clarion—Milwaukee. The development director also serves as assistant to the superintendent. This department has access to the AS/400-based human resources data, telecommunications, dictation, and mail routing. The director is a member of the administrative council.

Controller's Department

The controller's department performs purchasing, information systems, and financial control functions as well as all accounting and treasury functions. The controller, who also assumes overall responsibility for finance, leads the department. The head bookkeeper reports to the controller and spends about one-quarter of her time performing system operator responsibilities. Typical daily tasks include answering users' questions and performing file backups for the AS/400. The controller is also responsible for the housekeeping and maintenance departments. Neither of these departments is tied into the computer network.

**EXHIBIT 2** Continued

“I recently talked with an old classmate of mine who is using a computerized database to store addresses for frequent mailings. He addresses envelopes through the printer in a fraction of the time it used to take. I send a lot of mail to local businesses every month. Can we do that on the system?” (Executive Secretary)

“We had two programmers working for us at my last school. They would ask us about our needs in admissions and would customize software that we licensed. I enjoyed using the system since I helped design the applications. Why don’t we have that kind of help?” (After Care and Admissions Coordinator)

“Since I just joined the Clarion staff about a month and a half ago, I’m not sure what is available on the system. We used computers extensively at my university. Are there training sessions offered so I can learn more about the system?” (Associate Program Supervisor for Activities and Honor Jobs)

Following the staff meeting, Young spent time trying to determine if the current system was really cost-effective for Clarion—Milwaukee Division. Although it was clear that the system had potential, his inquiry showed it was not getting the level of use his predecessor had envisioned.

Young realized he faced a challenge in convincing his boss of the need for any improvement in the current

system. Superintendent McHardy had always been hesitant to incorporate any new technology into the school's operations. Young once overheard McHardy mention to a Board member that he felt that "computer technology and the treatment of troubled boys just don't mesh."

A New Long-Range IS Plan

In December 2005, McHardy called Young into his office. "John," he began, "I'm hearing that you're asking questions about the computer system. Your inquiry matches my concerns about the way we are managing our information system—or should I say *not* managing it? From what I can tell, few people on Clarion—Milwaukee's staff fully understand how our current systems are functioning and what capabilities are available. Furthermore, we have only sketchy ideas of what our IS objectives should be over the next few years—and most of those are probably only in your head."

Young nodded in agreement, as if he truly had a vision of Clarion—Milwaukee's IS strategy. McHardy continued, "We've also got to get a handle on the cost situation. Are you aware that we have spent more than \$80,000 on hardware and software maintenance agreements alone in the last 12 months? I want you to really dig into the information systems area so you can include an assessment of where we are now and a long-term direction for information systems for the Clarion Board of Directors next June along with your regular business plan and budget presentation. Can you do it?"

In mid-January 2006, Young formed the Information Systems (IS) Task Force to help develop the IS assessment and plan. Besides Young, the six-member task force included Christopher Larson, Director for Treatment; Brian Thomas, Assistant to the Superintendent; Ann Lyman, Supervisor of Social Services; Lara Kirk, Education Supervisor; and Michael Todd, Program Supervisor. As indicated on the organization chart in Exhibit 2, the task force was composed primarily of department-level management.

At its first meeting, Young defined the objectives of the IS Task Force—to explore the IS needs of Clarion—Milwaukee employees and determine what enhancements (if any) should be made to the hardware, network, database, and software so that the information system would better fulfill the staff's mission-critical requirements. At the meeting, Young suggested that task force responsibilities would require only minimal time commitment by the staff. He told the group simply "to keep your ear to the ground and listen for needs that are not being met."

The IS Assessment Process

By their mid-February 2006 meeting, the IS Task Force members had not developed a list of new needs. Instead,

they reported that they had received substantial informal input from staff indicating that the current system was not living up to expectations. In an effort to identify the root causes of these disappointments, the task force decided to conduct a staff survey with the goal of understanding the most common complaint—the lack of communications throughout the organization and the failure of the school's information system to remedy the situation. The survey was distributed by Young's office during March 2006. Some responses were not received until a full month later. Results of the survey are shown in Exhibit 3.

An initial review of the results of the IS Task Force's survey indicated that personal contact was seen by the respondents as the most important form of communication among staff at Clarion—Milwaukee. Second was the telephone system. Third on the staff's list was the AS/400's electronic mail system. Most staff members were aware of the communications software products available on the AS/400, but many were not using them. Further down on the list of ways to communicate was reports. Although hundreds of different paper reports were processed regularly, the importance of these types of written communication was perceived as low.

The task force considered the possibility that the current information system had not proved as effective as hoped simply because it was not being used extensively by staff. By checking the system logs (an automatic record of system usage generated by the operating system), it was determined that while an employee might have been logged on the system for most of the day, he or she was actively using it less than 15 minutes each day. The task force members were not sure why the system was not being used as expected.

In addition to conducting the survey, task force members allotted time at their own departmental meetings in March 2006 and during one-on-one conversations to solicit responses from other members of the units for which they had primary responsibility. Discussion of these issues was awkward for some of the task force members because they were not well educated in the area of information systems.

Task Force Interviews

Highlights from the IS Task Force's personal interviews helped better define the attitudes of Clarion—Milwaukee's staff. One task force member, Lara Kirk, reported to the committee at its late-March 2006 meeting that she had conducted a group interview with instructors who had used the system for electronic mail. She recalled one teacher saying, "It was great during the first month or two when we could actually find a PC available, but after that, they got so crowded. I don't have time to wait in line. I thought these were supposed to be *personal* computers." Another

Background

A questionnaire was distributed to all full-time employees except for janitorial and temporary services personnel. A one-week turnaround time was requested. Although the employees were not required to identify themselves on the form, department names were noted on each questionnaire before it was distributed. The overall survey response rate was 71 percent. Lower return rates were apparent in the education and social services departments. No surveys were returned from the maintenance department. Some returned surveys contained questions that were not answered.

Findings

The following summary of the information resources survey has three main sections: Mechanisms for Verbal Communication, Mechanisms for Written Communication, and a Summary of Detailed Data Analysis.

Mechanisms for Verbal Communication

Type	Frequency
<i>Large formal staff gatherings</i>	
• General staff meetings	1 per year, or when there was a major crisis
• Convocations	3 per year
• Institutional treatment team meetings	1–2 hours, once per week
• In-service training sessions	1 per month
<i>Large informal staff gatherings</i>	
• Weekday lunches	Most staff were required to eat with the students
• Holiday parties and banquets	5 per year
<i>Small formal staff gatherings</i>	
• Unit treatment team meetings	1 or 2 per week
• Administrative Council meetings	1 per week
• Departmental meetings	1 per week
• Teachers' meetings	Every weekday morning
• Supervisory sessions	Approximately 1 per month
• Performance reviews	Annual, with supervisor
• Scheduled one-on-one meetings	Various
• Long-range planning committee meetings	4 per year
<i>Other informal staff gatherings</i>	
• Teachers' lounge discussions	
• Work space area conversations by coffee machine and mailboxes	
• Service staff's break room conversations	
• Unscheduled one-on-one meetings	
• "Parking lot" conversations	

Mechanisms for Written Communication

- Scrap notes: notes of all shapes and sizes, no format
- Memos: a standard 4-copy form, many per day
- Weekly treatment services calendar: 4 to 6 pages

- Special request forms: various requests
- Minutes of formal meetings and supervisory sessions: 1 to 6 pages
- *The Clarion Record*: 5 to 10 page quarterly internal report of the corporation
- Semester calendar: 20 to 26 pages three times per year
- Financial statements: 6 pages issued monthly
- Departmental one-year goals: 2 to 6 pages annually
- Annual audit: 10 to 12 pages annually
- Five-year plan: 40 to 60 pages, updated annually

Summary of Detailed Data Analysis

For each of the following questions, the survey question (as it appeared on the questionnaire) precedes the summary analyses.

Question: What information sources do you rely on most to accomplish your daily job tasks?

	<i>Direct</i>	<i>Telephone</i>	<i>Written</i>	<i>Computer</i>	<i>Other</i>	<i>Total</i>
Responses	32	11	6	8	0	57
Percent (rounded)	56%	19%	11%	14%	0%	100%

Data from the above question displayed by job classification (percent rounded):

	<i>Direct</i>	<i>Telephone</i>	<i>Written</i>	<i>Computer</i>	<i>Total</i>
Treatment	65%	15%	10%	10%	100%
Management/Administration	67%	11%	11%	11%	100%
Instructional	30%	20%	10%	40%	100%
Clerical	0%	70%	0%	30%	100%
Social Services	80%	0%	20%	0%	100%

Question: Which of the following information resources would you most like to use more?

	<i>Direct</i>	<i>Telephone</i>	<i>Written</i>	<i>Computer</i>	<i>Other</i>	<i>Total</i>
Responses	8	5	5	19	0	37
Percent (rounded)	22%	14%	14%	51%	0%	100%

Data from the above question displayed by job classification (percent rounded):

	<i>Direct</i>	<i>Telephone</i>	<i>Written</i>	<i>Computer</i>	<i>Total</i>
Treatment	24%	24%	24%	28%	100%
Management/Administration	10%	0%	10%	80%	100%
Instructional	50%	0%	0%	50%	100%
Clerical	0%	25%	0%	75%	100%
Social Services	0%	0%	50%	50%	100%

Question: Which of the following computing functions have you used? (Select more than one if necessary.)

“Percent of respondents” designates percent of respondents who indicated the specific answer for this question if they indicated at least one answer for this question. “Percent of all” indicates the percent of responses as a portion of all Clarion employees.

	<i>E-mail</i>	<i>Database Entry</i>	<i>Database Query</i>	<i>Calendaring</i>	<i>Spreadsheet</i>	<i>Accounting</i>
Responses	36	32	23	7	3	10
Percent of respondents (rounded)	80%	71%	51%	16%	7%	22%
Percent of all (rounded)	28%	25%	18%	5%	2%	8%

Question: How much formal training have you had on the computer system?

“Percent of respondents” designates percent of respondents who indicated the specific answer for this question if they indicated an answer for this question. “Percent of all” indicates the percent of responses as a portion of all Clarion employees.

	<i>None</i>	<i>Demo</i>	<i>1–3 hr</i>	<i>4–7 hr</i>	<i>8–16 hr</i>	<i>17–32 hr</i>	<i>32+ hr</i>
Responses	2	5	11	7	7	6	7
Percent of respondents (rounded)	4%	11%	24%	16%	16%	13%	16%
Percent of all (rounded)	2%	4%	9%	5%	5%	5%	5%

Question: Circle either I am satisfied or dissatisfied with the amount of training I have received.

“Percent of respondents” designates percent of respondents who indicated the specific answer for this question if they indicated an answer for this question. “Percent of all” indicates the percent of responses as a portion of all Clarion employees.

	<i>Satisfied</i>	<i>Dissatisfied</i>
Responses	18	25
Percent of respondents (rounded)	42%	58%
Percent of all (rounded)	14%	20%

Question: How much time do you spend working on a PC or the central system on the average each day?

(For this question, answers were compiled only by job classification.)

	<i>None</i>	<i>< 1 hr</i>	<i>1–2 hr</i>	<i>3–4 hr</i>	<i>> 4 hr</i>
Treatment	0%	50%	31%	14%	5%
Management/Administrative	0%	31%	38%	15%	15%
Instructional	0%	60%	10%	20%	10%
Clerical	0%	0%	67%	33%	0%
Social Services	0%	90%	10%	0%	0%

EXHIBIT 3 Continued

added, “I have found PCs available early in the morning, say between eight o’clock and nine, but whenever I try to log on, I get a message telling me the system is not available. I think it says something about backups—whatever that means.”

When Kirk pursued these problems, she learned from Jean Baker that the system backup schedule took place each morning between 8:00 and 9:30. When Baker was backing up the system, she specified that no other users could log on.

Christopher Larson also relayed comments from one of his group interview sessions. “We have found that it is easier to use our old file card system to look up student records rather than walk all the way down the hall to the nearest PC to use the system. But I heard the same information is actually available online. I just don’t have time to go stand in line and wait to use the system.”

Michael Todd reported that although he had thought the clerical staff was using the calendaring software product on the AS/400 to help his associate program supervisors with room scheduling and personal calendar services, they were actually using the functions very infrequently. When he questioned the secretaries during the group interview, they told him that “the associate program supervisors like to keep their own calendars and they never give us enough time to schedule activities ahead of time. We usually end up rushing around trying to find an open classroom or conference room for their needs at the last minute.”

Brian Thomas discovered that his assistant and the director of planned giving were using the system less than he had thought as well. “To make a long story short,” he said, “no one ever told me what value I would get from the new computer system. I could use a better phone system so I could hold conference calls among potential donors rather than a better computer system. I’m sure I could raise more money if I could put donors in contact with each other one on one. I have heard that we spent a lot of money on the AS/400. Who is using it?”

Young also heard reports that staff members at Clarion—Milwaukee felt defensive when faced by what they perceived as an “interrogation” by their supervisors on the IS Task Force. It was obvious that some employees were sugarcoating their answers while others simply avoided giving their opinions.

Obtaining Outside Help

One important result of the task force assessment survey and the individual interviews was the conclusion that the task force needed additional planning assistance from an objective source. At the special request of the task force, Clarion’s Board of Directors approved funding in late April 2006 for Young to hire a consulting firm to assist with his assessment and plan.

In a hurried search for a consulting firm to assist at Clarion—Milwaukee, the IS Task Force selected LTM Consultants, Inc., from among three companies that submitted proposals, largely because LTM had a local office in Milwaukee and had done some work for other divisions of Clarion.

LTM was a growing firm of 47 professionals and 18 support staff members based in Chicago. The firm had

offices in three states, and its expertise included accounting, information technology, and general management consulting. Young believed that LTM would provide the best value to Clarion—Milwaukee. The final engagement letter from LTM is included as Exhibit 4. Young expected LTM to deliver an IS assessment and plan for the school by the first week of June 2006. Although Young would assume ultimate responsibility for the recommendations he would deliver to the Clarion Board of Directors, he considered an outside set of recommendations as well as the task force work critical to his success with the Directors in June.

Young spent a full day briefing the three LTM consultants on the history of Clarion—Milwaukee’s IS situation, including the results of the recent IS Task Force survey. In his position as Controller, Young explained that he was responsible for making sure that major capital investments were paying off. He wanted to know if the system was filling the information needs at Clarion—Milwaukee and which long-term improvements should be made. He also pointed out organizational change issues to LTM that he thought might have affected system usage. For example, Clarion—Milwaukee had grown in three years from 90 to 120 students. A number of new positions had been created to take on the extra load. Full- and part-time staff had increased by almost 30 percent, and turnover and absenteeism were very low.

“I’m not sure,” Young told the LTM team, “but my biggest challenge may be in selling McHardy that the system was a good investment for Clarion—Milwaukee and that further investment is warranted.” He went on to describe a brief discussion he had with McHardy when they bumped into each other on the way to the parking lot one evening. “When I asked Sean’s opinion of the school’s information system, he said that he hadn’t found any practical use for computers so far besides the word-processing software on his PC (he uses it for his daily to-do lists).” Young recalled McHardy’s words, “I don’t use e-mail, I just make a phone call or walk over to someone’s office.” McHardy continued, as he headed for his car, “Sometimes I wonder if our investment was worthwhile, John. I know the Clarion Board of Directors is counting on you to make sure that Clarion—Milwaukee is getting full value from the system.”

Regarding his own concern about the use of the current information system, Young remembered that his own department had a difficult time with specialized billing needs. Most of the billing was done directly through the system’s accounting software, but about 10 percent was first done by hand and then manually entered into the invoicing system as adjustments at the end of a period. Young admitted to the consultants, “If I can’t get invoicing to work consistently for my own staff, how can I expect others to be excited about other applications?”

April 20, 2006

LTM Consultants
765 Corporate Circle
Milwaukee, WI 51744

John F. Young
Controller
The Clarion School for Boys, Inc.—Milwaukee Division
Post Office Box 2217
Milwaukee, WI 51740-2217

Dear John:

LTM appreciates the opportunity to work with the Clarion School for Boys, Inc.—Milwaukee Division in identifying critical issues related to its future information systems environment and determining its future systems strategy. The primary objectives of our engagement are to:

- Evaluate the current strengths and weaknesses of Clarion—Milwaukee's information systems.
- Determine the information systems strategy required to achieve Clarion—Milwaukee's short-term and long-term business goals.

In consideration of the importance of this engagement, we have combined the unique talents of LTM consultants from three of our offices. A three-person team of consultants from LTM's Information Technology Group in Milwaukee, the Human Factors Group in Indianapolis, and the Strategy Group in Chicago will ensure that this engagement is approached from both a business and technical solution perspective.

One critical success factor of this project is to quickly gain an in-depth understanding of the needs, issues, and constraints related to Clarion—Milwaukee's information systems environment. Only then can we convert the present functional needs into a broad set of systems requirements and a subsequent strategy.

We estimate this analysis will require approximately four weeks to complete at an estimated cost for professional services of \$42,500. Costs for travel and lodging expenses will be billed as incurred. An initial invoice of \$20,000 will be issued fifteen days after start-up, and a reconciling invoice will be submitted upon completion of the engagement.

John, we look forward to working with you and the Clarion—Milwaukee School on this important assignment. I can assure you that we will bring the value that will make a difference to your school in the future.

Sincerely,

C. J. VanZant

Carl John VanZant
Vice President

Approved: John F. Young 4/23/06
Clarion School for Boys, Inc. Date

EXHIBIT 4 Engagement Letter from LTM Consultants, Inc., to the Clarion School for Boys, Inc.—Milwaukee Division

During the visit by the LTM team to Clarion—Milwaukee in May, the lead consultant mentioned that she had done some investigation of basic hardware and software options for the school. First, she had contacted several other users of the AS/400 in Milwaukee and Chicago to see how they were handling ongoing issues of maintenance. She discovered that while Clarion's current AS/400 is no longer supported by IBM, there are several reputable third-party maintenance organizations in Milwaukee that could service the hardware. She also learned that continuing software maintenance and upgrades would be somewhat more difficult, but she found several independent software specialists who could provide support for the current operating system and

applications software. While she would not recommend this alternative, Clarion—Milwaukee could continue its operation as is at least for the next few years.

The consultant had also contacted the local IBM sales office. She found that the AS/400 had gone through several iterations since the machine was purchased by the school. The AS/400 series had been replaced by the IBM eServer iSeries line, which in turn was replaced by the IBM System i family of hardware. Most recently, IBM had announced a version of the System i for smaller organizations that needed to upgrade from an AS/400. The sales representative mentioned that the new operating system is called the i5/OS and still supports the AS/400 DB/2 database applications. The IBM sales representative

LTM Consultants
765 Corporate Circle
Milwaukee, WI 51744

June 3, 2006

John F. Young
The Clarion School for Boys, Inc.—Milwaukee Division
Post Office Box 2217
Milwaukee, WI 51740-2217

Dear John:

LTM has completed our study at Clarion and we submit the enclosed written report per our agreement. As I mentioned to you during our telephone conversation, we would be happy to present our findings to Clarion, Inc.'s Board of Directors meeting in Chicago if you wish.

Please note the four main sections of the report. First, a sampling of comments from Clarion—Milwaukee's staff characterize the general attitude toward information systems (IS). Strengths and weaknesses of the current information system are highlighted. Finally, specific recommendations are presented for improving Clarion—Milwaukee's information system.

As I am sure you will agree, there are many opportunities to improve Clarion—Milwaukee's daily IS operations. We would like to meet with you soon to discuss how LTM can assist you in making our recommendations operational.

Sincerely,

C. J. VanZant

Carl John VanZant
Vice President

Enclosure

Long-Range IS Plan Final Report

Findings in this report are a result of analysis during the last week of April and the first three weeks of May 2006. Eighteen person-days were spent on site at the Clarion—Milwaukee school. LTM consultants began with a kickoff meeting that included six department supervisors, three directors, and the superintendent. In this meeting, the scope and purpose of LTM's engagement was defined: to identify critical issues related to Clarion—Milwaukee's future information system (IS) environment with the goal of defining Clarion—Milwaukee's future IS strategy.

Included in this report is a selection of comments made by Clarion—Milwaukee staff during both formal and informal interactions with LTM consultants. The following six questions were used as a starting point for each interview. A majority of the interview time was devoted to exploring responses to initial questions using follow-up questions.

1. Are there any recommendations you would like to make regarding how the Clarion—Milwaukee Division school handles information—written, computer, telephone, or direct (face-to-face)?
2. What is the most useful form of information you receive?
3. In what ways do you feel this form of information is vital to your work objectives?
4. What could be done to make Clarion—Milwaukee's information system even more beneficial to your work?
5. Summarize the strengths of the current information system.
6. Are there any additional comments you would like to make regarding future enhancements to Clarion—Milwaukee's information system?

The following interviews were conducted during the first three weeks of the study:

- Six 2-hour two-on-one interviews with department supervisors (two LTM consultants and one supervisor)
- Six 1-hour interviews with the unit directors
- Twenty-three 1-hour two-on-one interviews with nonsupervisory staff

LTM consultants attended the following meetings during the last three weeks of the study:

- Two weekly administrative council meetings (comprised of the nine supervisors and the superintendent)
- One weekly institutional treatment team meeting (comprised of the superintendent, director of treatment services, deputy director of treatment services, supervisor of the program department, associate program supervisors, supervisor of social services, social service counselors, education department supervisor, and transition department supervisor)
- Two scheduled department meetings and four impromptu department meetings
- Five daily teachers' meetings
- One weekly unit treatment team meeting (comprised of one teacher, two members of the child-care workers staff, and a member of the social service staff)

LTM consultants randomly queried 17 of Clarion—Milwaukee's employees in the halls of the school and in the parking lot by asking questions about their uses of current IS resources at the school. Staff comments were recorded during both formal and informal conversations.

The remainder of this report is divided into four main sections: Sampling of Staff's Comments, Strengths of Clarion—Milwaukee's Information System, Weaknesses of Clarion—Milwaukee's Information System, and Information System Strategy.

Sampling of Staff's Comments

"I have been trying to finish this month's books for the last two days, but I am having the same problems as last month. The accounts receivable software program is still giving me difficulties. I think I'll just do them by hand again this month."

(Bookkeeper)

"I use the scheduling module all the time for my event scheduling since most of the work I do runs in biweekly cycles. The automatic messages remind me when I have something due."

(Clerical Worker)

"There was a lot of initial excitement about e-mail, but I haven't heard much about it since then. I know I've been too busy to learn it myself, and I missed the training sessions because of other meetings. The only thing I've heard is that a few of the teachers sent out e-mail to others, but never got a reply. Maybe the interest died down because everyone didn't get training right away."

(Education Supervisor)

"I'll be honest with you. Although I have been using the system for almost a year now, it is not easy to use. I think my daughter's Mac is much easier."

(Development Staff Member)

"I remember someone mentioning that there is an inventory management software package we might use for our kitchen supplies, but I haven't checked into it yet."

(Kitchen Manager)

"In my last job, we used a program on our computer to monitor the progress of our students. It was a custom package written for us by a consulting group. Although it took about 10 months to complete the software, it worked very well for our special needs."

(Transition Counselor)

"It would help us if we had a reliable system for keeping the student's medical records. Sometimes the note cards get misplaced, and you don't know about it until you really need one."

(Nurse)

"I just bypass the menu system since it slows me down . . . especially since I have set up generic templates for all the common reports."

(Secretary)

"I am responsible for producing the weekly treatment services calendar. Because I am continually making updates, my biggest complaint is that I have to walk down the hall whenever I want to get a printed copy."

(Associate Program Supervisor)

Strengths of Clarion—Milwaukee's Information System

Hardware and Software

1. Dictation equipment is used extensively by treatment personnel. This use increases efficiency for both treatment staff and the secretarial staff who transcribe the dictations.
2. Personal computers are used by the controller and the director of development to generate overhead slides for presentations.
3. Software application programs are flexible enough to be useful for both beginners and advanced users.
4. Adequate software documentation manuals are available for users.
5. The AS/400 file transfer product allows data transfer between PC and mainframe units. It allows flexibility for those who use PCs a lot.
6. The AS/400 is expandable in case additional workstations or processors are needed.

Policy and Procedures

1. System backups are done on a daily basis and are well organized.
2. Quarterly preventive maintenance schedules coordinated through IBM representatives have been effective in the past.

Staff Perceptions

In general, interviews revealed that most of the staff, although not totally satisfied with Clarion—Milwaukee's information system, felt that the system was likely better than what existed in comparable facilities. Most frequently noted comparisons were with a local mental health facility that is experiencing severe system difficulties.

Weaknesses of Clarion—Milwaukee's Information System

Hardware and Software

1. Resultant quality of dictated memos is largely dependent on the level of experience of the secretary.
2. Some needed software is not available on the AS/400, necessitating use of personal computers for some reporting functions.
3. Self-paced tutorial software is not available for users.
4. A number of users stated that PCs were not available when they needed them late in the day. PCs are used heavily from 3:00 P.M. to 5:00 P.M.

Policy and Procedures

1. At least 90 minutes each day of the senior bookkeeper's time is spent running system backups and initial program loads (IPLs). Consequently, others cannot use the system during that time, and Ms. Baker is not available to perform her regular supervisory functions.
2. Requests for report changes are routed through department supervisors to either John Young or Jean Baker. Once each month they are reviewed and reprioritized by Baker and Young. Baker then works on requests according to priority, as time

permits. Day-to-day operations require Young or Baker to answer user questions as they come up, which reduces the time they have for their primary responsibilities.

3. Only two individuals have attended college-level computer courses. A formal training schedule does not exist.

Staff Perceptions

1. Administrative council members were given very limited opportunities to provide input for the original computerization project in 1998. Thus, they perceive the current system as incapable of providing for their needs.
2. Direct personal communication has become more difficult as staff size has increased and departmental specialization has evolved.
3. Many of Clarion—Milwaukee's would-be IS users have decided not to use the system because they find it difficult to find an open PC.
4. Secretarial staff use the AS/400 application software more than any other personnel. The AS/400 is regarded by many as only a tool for performing reporting tasks.
5. Staff who use accounting applications have a sense that they are “the shoemaker's children” whose applications receive lowest priority.

Information System Strategy

The following recommendations are arranged in general categories, with more specific suggestions offered in the conclusion:

1. **Establish a permanent staff position for IS management.** It is difficult for a staff member to handle an information system project as a part-time assignment when she has a multitude of other responsibilities and projects to oversee at the same time. For this reason, a new manager-level position should be created with primary responsibility to manage Clarion—Milwaukee's information system (including computing networks, personal computers, and telephone systems). Additional responsibility should include evaluation and implementation of IS training needs. The new IS manager should report to the controller and have permanent membership on the long-range planning committee. The individual selected for the IS manager position should have extensive computer science background and information systems experience.
2. **Establish a team approach to planning.** Planning should initially be conducted by a small team with strong leadership, making sure that feedback is obtained from the various user groups in each of the departments. A feedback process should be used to motivate staff toward cooperation and support of IS projects. This feedback can be accomplished by soliciting their input and explaining system benefits so they will develop a sense of ownership. Potential “stakeholders” should also be identified as this process reduces the barriers to change.
3. **Involve and evaluate the entire system when considering all IS projects.** Telecommunications, central computer, and PC decisions should not be made in a vacuum. When IS-related decisions need to be made, Clarion—Milwaukee's entire IS must be considered. The new IS manager's responsibilities should include researching “high-impact” issues. This procedure should be regarded as an integral part of Clarion—Milwaukee's information system evolution. Overall evaluation should include input from experts within each department.

A formal impact assessment methodology should be established to ensure a comprehensive and consistent evaluation. The methodology should include consideration of the following:

- What are the attitudes of employees regarding the introduction and use of the new system?
- How should Clarion—Milwaukee's business practices change as a result of the new system?
- Should organizational restructuring occur, including changes, additions, or eliminations of staff positions?
- How much experience does Clarion—Milwaukee have in this particular area?
- What other current projects or strategic issues could compete with this project?

Use of a formal impact assessment methodology will allow identification of opportunities with low, medium, and high risk that can be considered when appraising the response to future change. Furthermore, in concert with an evaluation of the entire information system, this technique facilitates the development of a rolling, long-range IS plan.

4. **Install a formal approach to IS planning.** A variety of techniques can be used for IS planning. “Critical success factors” and “investment strategy analysis” are common frameworks. Elements of several of these techniques should be combined in structuring planning activities. It is also vital for the Milwaukee superintendent and the Clarion, Inc., board of directors to have proposals that can be judged according to the same criteria in the process of decision making. Although the formal process will undoubtedly be timeconsuming, our experience with IS projects suggests that this

practice will benefit the school in the long term by reducing the likelihood of inappropriate projects being implemented. A specific planning framework should include the following features:

- A. Master IS Plan.** A master IS plan involves identification of the school's strategic issues and the development of the planning infrastructure for the future. The master plan is based on an examination of Clarion—Milwaukee's formal mission statement with respect to current strategic emphases. Workshops should be held for staff with the goals of educating them as to the strategic process of IS planning and providing an understanding of broad IS management objectives. All employees at Clarion—Milwaukee should be aware of the necessity to manage all information—including text documents, voice messages, diagrams, and statistics—as valuable corporate assets. Staff should understand that computers, software, written documents, and telephones are not “theirs.” Decisions and procedures regarding these assets will be based on the treatment of these elements as “Clarion—Milwaukee Division” resources addressed within the master plan. Staff should also be instructed to identify “critical success factors” vital for accomplishing Clarion—Milwaukee's objectives. This process will link specific task activities to the master IS plan.
 - B. Top Management Involvement.** Primary attention should be given to techniques that facilitate top management involvement and support. The superintendent, along with the new IS manager, should play a critical role in long-range IS planning. All future IS planning decisions should also include substantial input from members of the administrative council.
 - C. Systems Life Cycle Methodology.** A “systems life cycle” methodology is recommended for use on each specific application system. It is also useful for establishing requirements and project timetables. When evaluating new application systems, consideration should be given to the life-cycle stage of each component. Avoid decisions that lead to purchase of an application just prior to the release of a new option. A formal system should be developed that facilitates identification of a software product's evolutionary position with respect to Clarion—Milwaukee's current technology. Only after application systems are characterized within the spectrum of “cutting edge” to “nearing obsolescence” and compared to the Clarion—Milwaukee Division's ability to manage new technology, should tactical decisions be made.
 - D. Rolling Timetable.** The master IS plan should include a rolling timetable in order to coordinate various project efforts and make effective IS investment decisions.
- 5. Incorporate IS requirements in proposed long-range planning objectives.** Long-range planning (LRP) objectives must include information regarding a standard set of topics relevant to information systems. Each LRP objective should address its potential impact on Clarion—Milwaukee's information system and specifically identify any additional requirements. It is because of the highly integrated nature of IS planning and other long-range planning that the new IS manager will have to work closely with Clarion—Milwaukee's controller.
 - 6. Establish IS objectives within Clarion—Milwaukee Division's five-year plan.** As Clarion—Milwaukee's IS planning requirements become more complex, it will be imperative to continually seek out new ways to make strategic decisions. For this reason, Clarion—Milwaukee should include ongoing evaluation of computer-based methodologies, which would increase planning efficiency and integrity, as part of the long-range planning process. The role of IS management must be evaluated and redefined in light of technological changes.

EXHIBIT 5 Continued

also mentioned that a new System i Model 525 would be four to five times faster than Clarion's AS/400 and could handle a full complement of eight disk drives (560 gigabytes) for all the online data storage the school could ever need. The consultant found that pricing for software is now user-based so the operating system and user software licenses would need to be relicensed for the conversion to a System i. The sales representative's estimate for a conversion to a System i at Clarion—Milwaukee would be between \$100,000 and \$130,000, including project management and professional services to support the conversion. The consultant mentioned that the IBM salesperson would be happy to visit with Young as soon as he was ready to make his recommendations to the board. Young expressed his appreciation to the lead LTM consultant for this information.

Decision Time

It was 4:35 P.M. on June 6, 2006—one week before his presentation. Knowing he would have to work with his IS Task Force to finalize the report, Young poured himself a cup of coffee and flipped open the consultants' findings, which he had received earlier that day (the report's text is included as Exhibit 5). He read LTM's report with the vigor of a graduate student, hoping the findings would be a panacea for Clarion—Milwaukee's information systems problems.

Young had intended to make LTM's report the basis of his own report to the Board of Directors. Now that he had read it, he thought it included some good ideas and suggestions, but it seemed lacking as a full IS plan.

As Young was reviewing the plan, Jean Baker brought an envelope into his office. She said “a nice young

man dropped this off just now. I told him that you were too busy to see someone without an appointment. He asked that I deliver it to you as soon as possible. He mentioned that he had heard from one of the members of the Board of Directors that you were considering an upgrade to the AS/400 system. He thought you would be interested in

what he brought.” Young opened the envelope and found a proposal to replace the AS/400 system with a Microsoft-based system (see Exhibit 6).

Young was now really unsure exactly what he needed to do, but he knew he would be burning a lot of midnight oil during the next few days.

Hooper Technology Services, Inc.
5517 Technology Place
Milwaukee, WI 51740

June 6, 2006

John F. Young
Controller
The Clarion School for Boys, Inc.—Milwaukee Division
Post Office Box 2217
Milwaukee, WI 51740-2217

Dear Mr. Young,

Hooper Technology Services is an authorized Microsoft value-added reseller, specializing in providing state-of-the-art solutions for midsize organizations based on the Microsoft suite of products.

We have learned that you are considering an upgrade to your existing IBM AS/400. As I am sure you have heard, IBM no longer provides full support to that system and has changed its focus to the follow-on System i.

We believe that your school would be well-served by converting your information technology system to one based on industry-leading Microsoft products. Your existing AS/400 applications would continue to run as a server on this network but additional applications would be deployed on a Microsoft platform.

You would not have to complete this migration all at once. We would propose two phases:

1. Install MS Exchange, MS Office, and MS Outlook and implement e-mail and shared calendaring on the MS network, plus provide DS-1 level connectivity to the Internet.
2. Install MS Dynamics CRM and implement an application for the Development Department and an application for care coordination for the Social Services, Program, Education, Transition, and ISIS departments.

The budget for Phase 1 includes servers (\$28,000), operating system licenses (\$6,000), client licenses (\$10,000), and professional services (\$10,000) for a total of \$54,000. For Phase 2, the cost is estimated at \$10,000 for more servers, \$2,000 for additional operating system licenses, \$10,000 for client licenses, and between \$40,000 and \$100,000 for professional services, for a grand total of between \$62,000 and \$122,000. While we cannot specify the cost of professional services in Phase 2 at this time, we would work with Clarion personnel to create a detailed statement of work and budget for Phase 2. However, we think you should seriously consider spending at least \$50,000 in staff training on the new system.

We would also strongly recommend that you add the personal computers (notebooks) needed for each staff member's use at home. This change would require another 120 notebooks, software, and printers at a cost of \$220,000 installed. The current set of desktop personal computers would be used for students as well as administrative staff use while at school.

We strongly believe that a migration to a modern architecture for the school will be of significant benefit to staff and students.

I would be pleased to discuss this proposal with you in more detail at your convenience.

Sincerely,

J. Caleb Hooper
Vice President