

Lifeline Systems, Inc. — The CareSystem Project

In November 1998, Ron Feinstein and Rich Reich, CEO and VP of Technology and Advanced Services of Lifeline Systems, Inc., were reviewing the status of the CareSystem project. The project, currently estimated at \$12 million (greater than 15% of Lifeline's annual revenues) would be a totally new information technology platform for running the telephone response center. Indeed, CareSystem was known among senior managers to be a "bet the company" project. Ron and Rich knew that a smooth migration to the new platform, scheduled to begin December 1, was essential. Delay could be costly and a lost phone call from a subscriber could mean a loss of life.

The CareSystem project was running eight months late and some 100% over budget compared to original estimates in 1996. Nevertheless, Ron, Rich and the rest of Lifeline's 7-person senior management team, which had been closely involved in all phases of the project, felt in retrospect that project problems had been well handled.

In mid-October Lifeline had announced an agreement to be acquired by Protection One, a security monitoring firm, subject to approval by shareholders of both companies. While Ron and Rich anticipated that Lifeline would continue quite autonomously after the acquisition, they were anxious that the new owners begin to see the benefits in cost reduction and expanded revenues as soon as possible. As in other respects, the new technology of the CareSystem project was key to such future benefits.

As they reviewed the status of the CareSystem project, Ron and Rich wanted to be sure they had not missed any areas of risk as the "go live" date approached.

The Business

Lifeline Systems was the market share leader in the "personal response industry," providing telephone answering service in response to elderly individuals who called from their homes. A call was typically initiated by the caller pressing a button on a pendant or wristband. This in turn activated the communicator box like a remote cordless phone. The call was answered and handled by a trained monitor from the call center in Lifeline's Cambridge or Toronto location. Each monitor, with a hands-free headset, sat at a computer terminal on which the essential information on the subscriber appeared as the call was answered. (For more information on the service, see www.lifelinesys.com.)

Lifeline manufactured the pendants and communicator sets and sold or leased them to health care providers throughout the US and Canada. A physician might recommend to a patient, particularly one living alone and with a condition not serious enough for full-time institutional care, the use of the Lifeline service. The local hospital would then install the equipment in the subscriber's home and show how to operate it. The hospital could provide the answering service themselves, or contract to pay Lifeline a monthly fee to answer calls on the provider's behalf from Lifeline's response centers.

This case was prepared by Cyrus F. Gibson at the Sloan School of Management, Massachusetts Institute of Technology. The author would like to thank the many Lifeline Systems employees who contributed to making the case possible.

From Product to Service

Lifeline was founded in 1974 by the inventor of the personal help button and communicator box devices. Initially the focus was on manufacturing and selling the product, through channels directly to the consumer. In 1978 A. Dennis Shapiro joined as Chairman and CEO. Significant new financing from private sources was achieved for product development. Marketing was refocused on hospitals and doctors. The response center service was established as a source of sustained revenue.

In the 1980's a new CEO was named, with Shapiro remaining as Chairman. Perceiving that the traditional channel through hospitals was maturing, the company sought to stimulate that market and also to broaden to other markets for its personal communicator products. Price reductions to hospitals led to a spurt of increased sales, with record revenue of \$32 million in 1991, growth in profit of 600%, and a near quadrupling of stock price. The emergency response equipment was redesigned and offered through new channels, such as telephone stores, for other consumer uses. In addition to these moves the company worked to increase the proportion of its subscribers who used its central response center.

However, difficulties with the expansion strategy quickly emerged. The devices through retail were priced at \$300, while hospitals paid over \$500 per unit for essentially the same technology, both plus a monthly fee for the monitoring service. Many hospitals, the traditional channel and partner in service, were alienated. Independently, Lifeline's revenues fell and a first quarter loss was reported in 1992.

Ron Feinstein, brought to the Lifeline Board by Chairman Dennis Shapiro in the early 1980's, became CEO in 1992. The company shifted away from the product diversification policy and refocused on the needs of the subscriber and the provider channel. Revenues and profits recovered, with steady growth continuing through the third quarter of 1998. (See selected financial statements, Exhibits 1 and 2.)

Current Operations

In 1998 the company growth and success continued to depend on products and services essentially unchanged for ten years. The proportion of revenue from service revenue (call monitoring and outsourcing of provider business such as accounting and billing to subscribers) had grown from 33% in 1993 to 60%. Over 2000 hospitals and other healthcare providers offered Lifeline services. Cost for installation was \$50 to \$100, and monthly fees for subscribers averaged \$32 per month. Total subscribers to Lifeline stood at over 350,000, some 230,000 of whom were served centrally by the company. Annual revenues from these monitoring services were running at approximately \$40 million, and increasing at an annual rate of 25%, compared to product revenues, at \$24 million and declining at 6% a year. It was estimated that in order to grow the number of centrally-monitored subscribers by 20% per year it would be necessary to add some 12,000 subscribers to the central database per month. This would be to replace those lost (22% to nursing homes, 17% deceased, and other less significant causes), and could come from new subscribers or from conversions from the provider monitored segment.

Monitors in the response center answered up to 18,000 calls in a 24-hour period, each call lasting from a few seconds to several minutes. The 230 monitors operated in three shifts continuously. Each shift was further subdivided into “self directed teams” of five to eight individuals, who sat near each other and offered assistance to and took calls for team colleagues as needed. Each shift also had at least two “coaches” and one “manager” in charge of the shift, all of whom were themselves experienced monitors. Coach and manager positions were only filled from within. Pay for monitors and coaches ranged from \$9.75 to \$14.00 per hour. Managers and the head of the response center were salaried, with an average gross pay of \$45,000 plus benefits. Benefits for all employees ran about 15% of base pay.

Managers conducted performance appraisal of monitors once every six months. Monitors were eligible for a merit pay increase once a year. A key basis for performance appraisal was the use of recordings of a monitor’s calls, with explicit comparison made to his/her team peers. Evaluation was based on how quickly and how effectively monitors handled calls. Coaches also conducted feedback discussions with monitors using the recordings, but not as direct input to pay increase decisions. One manager described an important factor influencing monitor performance, including quality of responsiveness and efficiency of handling calls, as the peer pressure from team members. Turnover of monitors was not significant, and in 1998 new hiring was going on at the rate of four per month.

Strategic Opportunities and Direction

Ron Feinstein and his senior management colleagues believed Lifeline was well positioned to grow and thrive in the evolving market for elderly and homebound servicing. They pointed to the projections of the growing population of the elderly, due both to the aging of the baby-boom generation and the increase in life expectancy. In addition, the achievement of a balanced Federal budget in 1997 had meant cutbacks in home health care funding, which in turn drove medical providers (Lifeline’s “customers,” who were key to recommending the emergency call service to their patients) to look for less expensive ways of caring for patients.

Lifeline held some 70% of the market for emergency response. Several senior managers believed their competitive position was strong, given their relationships with the providers as a sales channel and the effectiveness of their response center operations. One commented, “The only sizable potential competitor would be one of the big home and office security firms, but their style and culture are different. They protect *things*; we protect *people*. Getting into our kind of services would be a big change for them.”

In reviewing its history, Ron saw Lifeline entering a third phase of its business cycles, changing its nature but still within its founding vision:

I want this to be a company that sustains itself and gets stronger over time. We went from dependence on a maturing product to services, and now we are poised to be a business based on information exchange and information as a resource. Through these changes in the business we remain focused on our mission, to enable the elderly to live independently in their homes. We are positioned to take advantage of changes in demographics and

health care economics. The market for services to the elderly is just beginning to open up. We have and should be able to sustain our competitive lead. This business is a wonderful opportunity to help people, do some good, and get paid doing it!

Ron described the three strategic phases in Lifeline's history graphically as three life-cycle curves (see Exhibit 3.)

Staff and Management

Lifeline prided itself on providing an important personal service to its subscribers. Training and protocols for call center monitors reflected the importance of patience, courtesy and understanding in dialogue with callers. At the same time, diligence and accuracy in following up a call were vital, including providing information to responders (those in a subscriber's data file who were to be notified, such as relatives), notifying emergency services (such as the local ambulance service), and providing fax reports to the provider or physician upon closure of the case.

A recruiting video illustrated that monitors were themselves gratified and pleased with the service they provided. Many monitors first heard about Lifeline through friends who worked there. Several managers noted that they had elderly parents or relatives who were themselves subscribers to Lifeline. Less than 5% of calls were true emergencies, but monitors were encouraged to treat any call as an opportunity to provide support and reassurance to a subscriber. In times of need in the call center, employees from other parts of the company would leave their regular work and come to the center to help out.

Tom Loper, Vice President of Customer Care, described his role since joining Lifeline in 1995 as building the culture. With a PhD in organizational psychology and years of experience in human resources, sales and marketing, and as president of a firm, Loper had known and worked with Ron Feinstein over a period of years before being asked by Ron to come to Lifeline. Loper had overseen the development of systems and procedures for employee selection and training, for coaching and evaluation and rewards, and for communications and involvement. He and his colleagues believed they had succeeded in fostering a caring and committed workforce which was also diligent and highly effective in customer and subscriber relations.

Ron Feinstein conducted monthly informal sessions with employees, typically attended by twenty or more, in which virtually all aspects of the business were discussed.

The senior management group was composed of seven individuals, all but two of whom had been recruited by Feinstein when he became CEO in 1992. Feinstein had known and worked with most of these in a series of management positions at Dennison Manufacturing Company and elsewhere. The senior managers met monthly to discuss business, and also constituted most of the IT Steering Committee and key roles in the CareSystem team. Only one senior manager had left Lifeline during Feinstein's tenure as CEO.

The CareSystem Project

In 1996 the company began investigations that led to the CareSystem project to replace both the infrastructure and the applications for the telephony-computer based central monitoring services. At that time the existing, home-grown system, known as CORMIS, was ten years old, had been designed for 7000 calls per day (in 1998 calls were running up to 16,000 per day, and on-line phone time was growing at 30% per year), and was on a DEC-VAX based platform. CORMIS was built around a Cullinet (subsequently Computer Associates) database product. The database product, being of mid-1980's technology, had become obsolete with no easy upgrade path, restricting options for significant upgrade or enhancement. Computer Associates no longer provided effective support, and it had become virtually impossible to find support staff with any expertise (or interest) in the technology. The database and system architecture would limit future scalability and could not demonstrate the levels of fault tolerance that the rapidly expanding business required.

Rich Reich commented:

Our management team investigations led us to consider the significant advancement made in database technology since the original product that CORMIS used was developed, and to consider the rapid evolution of client server technologies. We fairly quickly determined that it should be a priority to develop an entirely new generation of call center service delivery platform that had the ability to support future growth and be flexible in meeting evolving business needs.

In addition, there was an incompatible parallel call system. In 1996 Lifeline had acquired CommuniCall, a firm which offered a social service of talking to subscribers, typically the elderly, for unlimited periods of time. It was infeasible to integrate the CommuniCall system with CORMIS. This resulted in two separate call center operations, with two separate desktop screens and two separate groups of monitors on each shift, and two separate billing and reporting systems. It was thus impossible to efficiently balance the assignment calls to available monitors.

Business Goals for CareSystem

Lifeline's senior management team set four business goals for the CareSystem project:

1. Reduce the risk of a lost call or break in communications with a subscriber during an emergency.

The system was designed to support this through increased capacity and fault-tolerant hardware and software. Moreover, the applications software at the desktop was to be "closed loop" in that it would be impossible for a monitor to let a call go unfulfilled without a warning notification. The system would be Y2K compliant, which could not be assured with the CORMIS platform

2. Improve efficiency and cost competitiveness.

When properly used by monitors, the system would enable more efficient and effective handling of calls, such as due to the capability of the monitor making more than one call

without hanging up on the subscriber. “System-enforced protocols” would result in service that was more consistent, more efficient, and of higher quality. The new system enabled “skills-based routing” by which a call from a subscriber with special needs (e.g., Spanish language, or diabetes patient who might require medical advice) was directed by the system to a monitor on duty with those skills, saving much time once the call was answered. The system would allocate calls to monitors, rather than depend on the current method of a monitor taking calls from the top of the list as he or she chose, thereby improving work distribution or “balancing.” Statistics would be collected individual monitor’s use, including not only total time on a call but also how effectively the features of the system were utilized. These statistics could be used in individual performance appraisal, or even for monitoring the monitors on a regular or real-time basis, enabling improved feedback to the monitors.

The new system was a necessary first step toward the move to new headquarters in Framingham, where the rental cost savings over Cambridge was expected to pay for half the amortized cost of the entire CareSystem project over ten years. And finally, the flexible and scalable new system would enable extending to multi-site centers in lower labor cost locations in the state or the country with no loss of reliability.

3. Support and enhance revenue and subscriber growth for the future.

The scalability feature of the system would enable expanded memory and database capacity as well as growth of needed monitoring desktops. The open-systems architecture would allow new and as yet unknown software to be plugged in to provide for platform enhancement. New services to the existing customer base were quickly envisioned, including such things as proactive calling to subscribers to remind them of medication or just to provide support.

4. Develop a foundation for the future around a central relational database.

While CORMIS had a central database of essential information for subscribers, it was structured to support a single service, and had limitations on how it could be modified and expanded. Before the new CareSystem database was defined, a significant effort was made by senior management to envision how the business could evolve and change in the future. While the specifics of future business offerings could not be articulated at this time, the new data model would be designed to accommodate the evolution of the business toward the vision. CareSystem would allow for a central database that could include and relate better information on subscribers, providers, referral sources, multiple services, and equipment.¹

It was expected that integrated data and information could be invaluable not only the current customers and subscribers, but ultimately for new markets. While managers were reluctant to describe what some of these were, one said, “Just imagine how valuable it would be if we

¹ The importance of central, shared data had not always been recognized at Lifeline. In 1995, several IT applications projects were contemplate or underway which would have served separate functional needs with separate systems. These included systems for manufacturing, for customer (health care provider) business operations and outsourcing, and for sales support, and even a separated system to replace CORMIS. As one manager put it, “We were at risk of losing what we now see as the crown jewels of our business.” After considerable discussion and debate, it was decided to work toward a common database for subscribers and customers.

could monitor our subscribers' vital signs in some way, and forewarn their doctors of an impending crisis. Or think of the value to the subscriber and interest to a local service to be able to help them with grocery orders or meals-on-wheels. The opportunities are huge."

Project Initiation

In 1996, having decided an entirely new system would be necessary, the management team next considered building their own new software vs. buying and integrating packages. This choice was made problematical by the fact that although there were many "computer-telephony integration" (CTI) packages on the market, most of them were for conventional uses like inbound customer-initiated inquiries or outbound telemarketing. In these uses initiation of the communication was predominately one-way and typically did not require a sequence of related phone calls. Lifeline's requirements included, for example, that a subscriber calling with emergency needs be kept on the line while one or more other calls were made on his or her behalf.

Early inquiries into package makers nevertheless led Lifeline managers to believe that modifications of currently available CTI and other software packages and their integration into a new system essentially customized to Lifeline's requirements was the best approach. They also decided to choose a systems integrator consultant. In October 1996, after a four-month proposal review and screening process, Cambridge Technology Partners (CTP) was chosen as the lead consultant. The choice included not only criteria of technical competence and experience with similar projects, but a judgement that there could be compatible working relationships and the opportunity for Lifeline technical staff to be integral to the project team.

From the earliest days of the project, Ron Feinstein and Rich Reich kept the Board of Directors informed and sought their advice. All recognized that if the upgrade effort failed, "we are out of business." One key member of the Board, with years of experience in the information technology industry, became an important supporter of the project and helped explain to and influence the views of other board members.

An overall schematic of the CareSystem architecture, from a company brochure, is shown in Exhibit 4.

Phase I – Scoping and Package Evaluation

The project began with an eight-week phase to establish requirements and scope of release one of the new system. Fifteen Lifeline staff and six CTP staff were full-time, plus technical experts and technology architects from CTP as needed. The lifeline core team included Rich Reich and Tom Loper, VP of Customer Care, plus managers representing all the business areas of the company. Win Shute, Director of IT who reported to Rich Reich, was also full time, as was the Lifeline project manager, Christine McFarland. A key ingredient of this phase, according to McFarland, was to ensure that software would be "component-based," namely would be installable and removable on a more or less plug-compatible basis. Moreover, the role of Reich and Loper was "to keep us thinking strategically and long-term" in setting requirements and evaluating software vendors.

An early activity of this phase was the senior managers' articulation of their view of current business needs, their vision of the future business needs, and their approach to an evolutionary path to the future. They worked at this intensively until they felt they were in alignment. This articulated vision became the basis for the interdisciplinary project team to define the scope and capabilities of the new system.

At about the same time, a user team of seven individuals was created. Five of these were monitors and coaches from the call center, one was from customer assistance (the group that dealt with the providers), and one from business management services, which dealt with such businesses as outsourcing to providers. The team of seven developed an extensive list of specific requirements for the proposed object-oriented, mouse-driven desktop. Their input was key to the design phase. The user team also became the trainers for CareSystem later in the project.

Phase II – Proof of Concept

At Lifeline's initiation, this phase was introduced into CTP's normal methodology. Partly as a result of the broad criteria and strategic discussions in the first phase, it was decided to build a prototype of the desktop screens for the call center monitors. This phase lasted six weeks. In retrospect, Lifeline managers saw it as an extremely important step in that concrete visible "screen pops" were generated and discussion of design, the next phase, was more concrete.

Phase III – Design

A result of the interest and insight of the previous phase was that more areas of complexity for desktop functionality were uncovered and carried into the design phase. In addition, because the platform was essentially being built for future enhancements and applications not yet known or imagined, there was a constant tension between growing the system and keeping it limited. Even the concept of scalable, plug-compatible modules for infrastructure and applications did not entirely ease this tension and the potential for deliberations to go on endlessly. Moreover, the team discovered during this phase that integration of vendor software packages was more complex than either Lifeline or CTP had anticipated. Good new ideas for functionality or modularity at the application level raised intricate specific problems of software integration. Each of these had to be documented.

The design phase began in early February, 1997, and ran six weeks later than scheduled, ending in mid-June. While Rich Reich and Ron Feinstein and other senior managers were wary of the consulting "burn rate" for every day beyond original plan, a rate of approximately \$20,000 per week, they and the team felt the discussions and reasons for delay were important.

Looking back on the early phases in October, 1998, project manager Christine McFarland said:

In my 12 years of project work in several companies and as a consultant I have never seen such dedication and involvement of the right people on a project. Managers with tenure and long experience in the running of the business were dedicated, full time, to the project scoping and design. Ron Feinstein met with us regularly and showed he knew what was going on. We all knew the importance, the risk, and the value of the project to the company's future. No one was afraid to raise constraints or suggest new ideas. It was textbook and successful in that respect.

In retrospect we may have bent over backward a little too much in being open to all inputs. Every new idea, good or bad, had to meet the test of what it would take to build into the system which we all knew had to be totally reliable and redundant.

We might have saved some time by being more forceful about what was really feasible for the project. But it's hard to see how the outcome at this point could have been better, particularly the commitment everyone around here feels now to a successful full implementation.

The design phase produced a two-volume set of system specifications.

Phase IV – Development

A full production environment was established at Lifeline for development, a “model office” next to the call center. Three releases were planned:

1. Minimum functional screens. —Completed in September 1997, including user testing and review.
2. Added functionality to screens, conversion of data from CORMIS for further development and testing. —Completed in late October 1997.
3. Final acceptance testing. —Scheduled for January 1998.

It was not until this third subphase that relatively serious problems arose. Bugs were discovered in the package software of one of the vendors. The issues escalated when the vendor was unable to respond or resolve the issues quickly. Ron Feinstein and a senior CTP officer visited the CEO of the firm in California. This resulted in a more efficient relationship, with the firms' software engineers coming on site to Cambridge to make the fixes. As this was nearing resolution, technical problems were found with a second vendor's package. This time escalation to the top and the vendor's responsiveness happened more quickly.

Rich Reich commented on the experience:

I don't know how we could have known at the outset what we know now.

There is a rapid velocity of development and change in leading software products. Young companies are experiencing meteoric growth and are frequently unable to keep up with the development of an internal infrastructure that assures quality and proper customer service. Vendor assurances of their package's reliability, and the fact that they are installed and running in call centers of their clients, were reassuring to us. Experience has now shown us that leading complex and flexible third party software can become very problematic when configured to meet the needs of a demanding non-mainstream business application. The applications exhibited significant bugs, and did not always perform as documented. It became apparent that their tremendous flexibility became their greatest weakness – not all configurations had been adequately tested by the vendor.

An additional difficulty in evaluating and applying new product categories is the lack of experienced development resources who would have some depth of understanding of the idiosyncrasies and limitations of new major products.

The issue for us, and for firms like us, is how to deal with these incredibly fast growing, dynamic vendors when we are as small as they are.

The net result of the delays was that final testing and the final release was not complete until mid-November. Nevertheless, the testing resulting in no serious problems, and it was felt that the cutover to live use, scheduled to begin with 5,000 subscribers on December first, was quite feasible.

Formal training of the monitors began in mid November, and was conducted by the seven members of the “user team” that had been involved in requirements setting from early in the project. The user team had also developed a new manual, called the “protocol book” which described in detail how the new system was to be used for all features. To enable training to take place, individual monitors at a time were taken from their normal job desk to the model office. To replace them, Lifeline had hired twenty additional monitors in October, spread over the three shifts. Training would extend well into 1999. It was estimated that the cost of training and implementation on the user side was some \$750,000.

The full implementation of CareSystem was now estimated to be the end of June, 1999. This would make the project a full year later than originally intended.

Tom Loper had this to say about the delay and about the project in general:

We all recognize the complexity and difficulty of the project. No one is really surprised at the delay; it isn't unusual and it certainly isn't the result of resistance to change or implementation. The monitors are motivated by a diligent handling of a subscriber, as well as by their concern for that subscriber's well being. We have designed the system and our use of it so that it provides the monitors with data which they can use for feedback on their performance. The user team represented a bottom-up factor in design.

While I think we have a deep store of support, we really must adhere to the schedule from here on to keep the confidence of the company. Monitors are upbeat about using the new system. The salesforce is eager to begin offering new services.

I've been involved in four major systems implementations in my career. This is one that has really been done right!

Looking Ahead

As Ron Feinstein and Rich Reich reflected on the history and importance of the CareSystem project they were comfortable with what they knew of potential issues and problems around the implementation itself. It appeared the plan for the transition allowed for backing out if unexpected problems occurred. They felt they had sought out and learned about all their vendors could tell them about the technical and user-change issues in such implementations, and that the involvement and change management within Lifeline was adopted to their unique culture. Nevertheless, they were anxious not to assume they knew it all, and wanted to make sure the rest of the management team had the same attitude.

While neither of the two had any intention of diverting attention from the transition over the next few months, both men were eager to see the benefits of the new services which could be offered, and to using the new infrastructure as a strategic resource for the future “information exchange” company. They felt the coming phase of the company’s business evolution, now to be within the structure of a parent company, would enable it to further fulfill providing a vita personal and health care services while making money.

Exhibit 1: Lifeline Systems, Inc.—Consolidated Statements of Income (*Dollars in thousands*)

	Dec-88	Dec-90	Dec-92	Dec-95	Dec-96	Dec-97	9 mos 98
Revenues							
Services	—	\$4,145	\$7,723	\$18,602	\$24,220	\$32,031	\$28,490
Net product Sales	\$19,867	26,141	18,211	23,440	24,864	23,776	17,746
Finance and rental	1,162	1,810	2,562	1,337	1,139	1,157	1,019
Total revenues	21,029	32,096	28,496	43,379	50,223	56,964	47,255
Cost and expenses							
Cost of Services	—	2,114	3,665	8,210	11,551	17,821	16,160
Cost of Sales	8,088	8,416	7,188	8,500	8,238	6,582	4,818
Selling, gen. & admin.	11,257	15,878	17,649	20,203	22,368	23,215	18,653
Research & development	1,259	1,211	2,257	1,701	1,771	1,709	1,066
Restructuring charge	—	—	2,280	—	—	4,310	—
Total costs and expenses	20,604	27,619	33,039	38,614	43,928	53,637	40,697
Income from operations	425	4,477	(4,543)	4,765	6,295	3,327	6,558
Total other income, net	132	306	83	740	783	594	298
Income before taxes	557	4,783	(4,460)	5,505	7,078	3,921	6,856
Provision for taxes	222	1,991	(1,516)	2,357	2,902	1,623	2,755
Net income	\$335	\$2,792	(\$2,944)	\$3,148	\$4,176	\$2,298	\$4,101
Earnings (loss) per share							
Primary	\$0.10	\$0.77	(\$0.54)	—	—	—	\$0.71
Diluted	—	—	—	\$0.51	\$0.67	\$0.37	\$0.66

Exhibit 2: Lifeline Systems, Inc. – Consolidated Balance Sheets (*dollars in thousands*)

	Dec-88	Dec-90	Dec-92	Dec-95	Dec-96	Dec-97
ASSETS						
Cash and cash equivalents	\$2,195	\$7,091	\$4,053	\$3,490	\$3,030	\$2,019
Accounts receivable, gross	3,574	4,248	4,025	6,132	6,259	7,622
Inventories	2,435	1,473	1,581	1,394	1,450	1,375
Net investment in sales-type leases	1,794	2,165	3,160	1,992	1,278	1,444
Other current assets, net	207	(50)	1,156	8,287	9,664	8,888
Total Current Assets	10,205	14,927	13,975	21,295	21,681	21,348
Property and equipment, net	2,711	2,868	3,530	4,648	7,127	15,435
Other assets	3,216	6,274	8,430	6,018	9,101	5,486
Total assets	\$16,132	\$24,069	\$25,935	\$31,961	\$37,909	\$42,269
LIABILITIES and STOCKHOLDERS' EQUITY						
Accounts payable/accrued expenses	961	1,808	1,661	2,508	3,583	3,306
Accrued payroll and payroll taxes	409	1,626	241	1,702	1,743	1,753
Accrued restructuring charges	—	—	1,460	—	—	2,324
Other Current Liabilities	1,106	2,061	1,643	1,832	2,352	1,645
Total Current Liabilities	2,476	5,495	5,005	6,042	7,678	9,028
Obligations under capital lease	581	529	458	32	25	16
Deferred taxes & other liabilities	631	1,994	2,010	1,598	2,586	3,508
Commitments						
Stockholders' equity						
Common stock, \$.02 par value						
10,000,000 shares authorized	70	72	116	123	124	128
Additional paid-in capital	11,718	12,138	14,080	15,161	15,618	16,340
Retained earnings	1,391	4,576	5,301	10,975	15,151	17,449
Less: treasury stock, at cost	(735)	(735)	(785)	(1,620)	(2,923)	(4,028)
Notes receivable-officers	—	—	(250)	(350)	(350)	(100)
Cumulative translation adjustment	—	—	—	—	—	(72)
Total stockholders equity	12,444	16,051	18,462	24,289	27,620	29,717
Total liabilities and stockholders' equity	\$16,132	\$24,069	\$25,935	\$31,961	\$37,909	\$42,269

Exhibit 3: Lifeline Systems, Inc. - Three Generations of the Business