timbuktu pro

Multi-platform Remote Control

Contents

Cost Control Through Remote Control

A practical approach to reducing the cost of supporting PC's in a multi-platform enviroment.

Executive Summary

While the price for personal computers continues to decline, the actual cost to own and operate PCs continues to rise. Research has shown that 85% of the estimated yearly cost to own/operate a computer is spent on technical support (15%), administrative tasks (14%), and misdirected end user activities (56%) performed in the course of using the computer. The single largest cost component is the time wasted by end users trying to help themselves or help their colleagues with problems best left to the IS department.

The secrets to managing PC ownership costs are first to understand them and then to implement technology as a tool to reduce costs. Remote control software, a product which allows a support person at the help desk take to control of a remote computer on the LAN or WAN, can greatly reduce the time spent troubleshooting and fixing computer problems. The help desk administrator can see the remote user's screen, move the mouse, and type on the keyboard while the end user watches and learns. Remote Control software also is an effective "just-in-time" training tool for when a user can't remember how to perform a particular activity. It allows the instructor to show the user how to perform the activity and then observe as the user practices.

Additionally, remote control technology can be deployed to aid and assist IT professionals with both routine and mission critical network management tasks such as remote server maintenance and diagnosis of network infrastructure problems. Although remote control is not a Systems Management application, it can be integrated into the leading System Management software suites to provide a real-time tool to remotely manage network assets such as email servers, file servers, and end user PCs on the network. Netopia's Timbuktu Pro Enterprise offers integration tools for the leading Systems Management applications including Netopia's netOctopus, Tivoli's TME, Microsoft's SMS, and Front Page Solutions HEAT to name a few. (Please contact Netopia for the latest integration modules and white papers.)

Timbuktu Pro's remote control technology saves money in four ways:

1. Call Handling Savings - One of the most significant cost components is the time the help desk spends on the phone troubleshooting and fixing end user problems. Timbuktu Pro allows the help desk to reduce the amount of time spent on the phone because they can take control of the situation and fix it the first time.

2. Reduced On-Site Visits - By using Timbuktu Pro, the first tier support team can generally resolve problems without dispatching an on-site technician. Some Timbuktu Pro customers report that they close 90% of all calls to the help desk during the first phone call!

3. Reduced End User Downtime - As call handling becomes more efficient, end user downtime declines and productivity increases. The more quickly the end user gets off the phone with a successful problem resolution, the more quickly the end user can get back to their job. End users are also less likely to spend a lot of unproductive time trying to fix the problem themselves if they know the help desk can solve their problem quickly using Timbuktu Pro.

4. Reduced Training Days - Timbuktu Pro allows the help desk to provide training at the moment when it is relevant to the task at hand and when the user is motivated to learn. Gartner Group studies have shown that this "just-in-time" training is far more effective and retained longer than traditional classroom study. Therefore, Timbuktu Pro can help reduce the cost of sending end users to class, and improve their skills at the same time.

This white paper includes a Cost Savings Model for help desks (Section VI) that demonstrates the cost savings that can be realized by implementing remote control technology such as Timbuktu Pro. Since every company's cost structures are different, we've also included a diskette with a Microsoft Excel spreadsheet that can be modified to meet your needs.

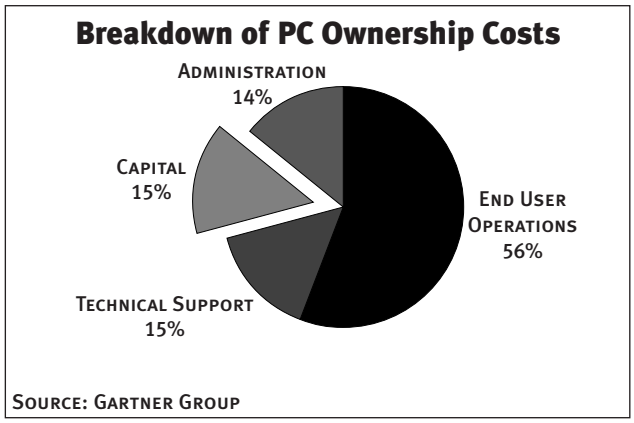
The sample model demonstrates that for a company of 1,000 employees, a first year investment of roughly $57,000 for Timbuktu Pro (including installation costs) can result in a savings of almost $380,000 in the first year alone. Over a five year period, Timbuktu Pro can yield a Return On Investment (ROI) of more an 800% and an accumulated net cash flow of over two million dollars. Read on to learn how you can create your own Cost Savings Model and see how much money can be saved by implementing Timbuktu Pro at your own company.

I. Introduction

Recent studies by leading research analysts have shown that while the costs of personal computer equipment acquisition continues to decline, the overall cost of PC and LAN ownership continues to rise. Gordon Moore, founder of Intel Corporation, claims that computing power (measured in millions of instructions per second or MIPS) doubles every 18 months while, in that same period, the cost of that computing power declines by 50%. If PCs are less expensive today and are expected to continue their downward spiral, why does the cost of PC ownership continue to climb?

As processing power continues to increase, software and hardware developers create new and improved products harnessing that power but adding complexity. Consider the basic word processor of just a few years ago and compare it to the multi-function, office automation software suites of today that containing hundreds of features, thousands of pages of documentation and large megabyte on-line help files. The sheer volume of information "at our fingertips" can be overwhelming to even the most savvy computer users.

Desktop computers, coupled with local area networks and new network-based applications, are now considered by many to be the strategic corporate information system. No longer do we rely only on the mainframe for the information we need in the course of business. As Scott McNealy, CEO of Sun Microsystems, so intuitively predicted, "the network is the computer." Growing PCs and LANs introduce new complexities, and the users of these systems require more extensive support. The proliferation of custom business, problem-focused client/server applications also contribute to the rising costs of support and training as we move from a centrally administered information system to a more distributed, even geographically dispersed, information system.



Over the next five years, companies will face a tremendous technological transition that will demand new investments in LAN-based technologies and resources. This paper provides an insight into some of the less visible, but very real costs of PC and LAN ownership, including: the costs of supporting end-users through the help desk using just-in-time training and application support; the costs of platform migration and Intranet-based systems management; how the expansion of the network beyond the corporate headquarters boundary can impact these costs even more; and ways to reduce costs in these areas through deployment of network-based technologies such as remote control.

II. The Real Cost of PCs

Recent studies by Gartner Group show that the capital expenditures for PCs only represent 15% of the overall costs of PC ownership which is estimated at about $8,000 per user per year. The majority of costs, categorized as End User Operations, are attributed to the time end users spend in unproductive activities concerning their computers such as formal and informal training, peer support, and data management. Added to this is the time spent on the phone with the help desk troubleshooting problems when end users finally give up trying to fix it themselves. Gartner Group estimates that each user, on average, spends 50 hours per year performing computer-related tasks not directly linked to their job responsibilities.

Technical Support costs per user are estimated at approximately $1,200 per year and account for about 15% of overall PC ownership costs. Technical support activities are defined as help desk support, application training & support, troubleshooting and configuration.

In addition to PC costs, managers also are faced with rising LAN costs. Gartner Group states that yearly LAN ownership costs can account for another $3,000 - $5,000 per user. Once again, the capital costs at 27% represent only a small portion of the overall cost. The highest cost element, 34%, is attributed to NOS/Applications. The NOS/Applications category of expenditures includes the help desk, training, troubleshooting, configuration, applications support and others. Applications support is the single largest cost item and is estimated at $250 per user per year.

Hidden costs such as misdiagnosis, peer support and training can account for as much as $875 per user. Hidden costs are usually associated with activities performed by employees outside of IS who are not necessarily qualified or authorized to do those tasks. Peer support is often the first tier of support. This is understandable since many LANs are in the individual department and out of the immediate control of IT management. Support was typically provided by the end user with the strongest technical background. And even with the advent of the centralized help desk and centralized systems management, this type of support still exists today. The costs for this type of support are very high since many times that departmental support resource is a highly paid individual who is not properly leveraged when supporting other users in the department.

III. Help Desk Automation

The key to reducing the costs of PC and LAN ownership is to invest in technologies that can reduce the time associated with the unproductive activities making up 85% of the cost ownership model. If End User Operations costs account for the majority, these costs should be the focus of cost reductions. Reducing technical support costs while improving the productivity of the technical support staff enhances this strategy as well.

The major component of End User Operations is the wasted or improperly leveraged time spent by end users who are, in essence, supporting themselves or are working with a help desk unequipped to provide quick and efficient support. Savings can be achieved by providing the support person at the help desk with tools that can 1) hasten the time to diagnose and resolve a problem and 2) provide better customer service to encourage end users to rely more on the help desk for problem resolution, rather than themselves or the skills of their peers.

There are several categories of help desk automation tools, but one, in particular, is well suited to achieving the two goals mentioned above. Assuming that a majority of the time spent troubleshooting on the phone is devoted to dialog between the support person and the end user to discern the nature of the problem and suggest potential fixes, then that time can be drastically reduced by providing the support person with a remote diagnostic tool which will enable him or her to troubleshoot the problem quickly. Remote Control software is best suited to this purpose since it allows the support person to see exactly what's on the remote computer's screen. The end user can show the support person the problem, and then the support person can fix the problem while the end user watches and learns.

IV. Systems Management Control

While remote control technology benefits can be easily quantified and measured for centralized help desks, the benefits also extend to IT organizations focused on the day-to-day management of the Intranet. Commonly known as Systems Management applications, many software developers provide useful tools that focus on inventory management, network administration, network security and software distribution. These software suites are useful in alerting IT professionals to a current or potential problem and can offer unique insight into the cause and resolution of the problem. However, they fail to provide technology that can quickly resolve the problem over the Intranet through simple control of the networked asset.

Remote control technology is uniquely suited to provide centralized Systems Management with a mission critical tool to instantly resolve network problems. It allows a network administrator to immediately take control of any file server, email server, or remote access server which the systems management console has indicated is failing or requires maintenance. From any location on the network or even remotely, the administrator can take control of the machine, reconfigure settings, perform routine maintenance, and even restart the server. This eliminates network downtime, delayed problem resolution, and extends the reach of any IT staff across the Intranet to virtually any site without the expense of time and travel.

V. Reduced Migration Costs

Organizations contain with a myriad of operating systems, each with unique benefits and associated costs. In the past, the predominant policy for IT organizations worldwide was to support as few operating systems as possible, thereby saving support costs. This model, although efficient, failed to take into account the productivity benefits associated with providing employees with the appropriate tools for their job function. For example, engineering personnel may benefit from the power of Microsoft's Windows 2000 operating system while graphic designers may benefit more from Apple's Mac OS X.

In today's heterogeneous environment, more and more companies are moving away from the single operating system model and embracing multiple operating systems across the organization. This phenomenon, known as "cascading operating systems," supports the theory that different operating systems will provide different cost and productivity benefits depending on the nature of the organization's business and the job function of the individual end user. This proposes a challenge for today's IT professionals who now need the expertise and infrastructure to seamlessly integrate different operating systems within the same organization.

Furthermore, support of multiple operating systems compounds the complexity of migration between platforms as newer, faster, and better operating systems become available. Where migration used to be viewed as an event, today it is a process. Different departments may migrate from one operating system to the next independent of one other. For instance, while IT may deploy Windows 2000 to the engineering staff, they may hold off on migration to Windows XP from Windows 98 for the sales force. In the meantime, marketing communications workers may move from Apple's System OS 9 to Mac OS X. The net result is a constant learning curve and change quotient within the organization both for the IT organization as well as the employee population in general.

Remote control stands alone in providing cost benefits for the actively migrating company through the concept of "just-in-time" training. Gartner Group studies have shown that traditional classroom training, like that provided for a new operating system, is not as effective as it could be because the training is not necessarily relevant or the end user is not motivated. Instead, companies are discovering that it is more effective to provide training resources that are available in the context of the end user's job and at the moment when the user needs the assistance, hence just-in-time training.

Many calls for support are not for the purpose of reporting a problem or malfunction. They are requests for "how to" assistance. This is an example of how just-in-time training can be provided through the use of remote control software. For example, the user is logging onto email for the first time (using the new operating system). Since all the icons and routines have changed, the user is incapable of obtaining access to the email server and either doesn't know how the new operating system works or cannot remember what was taught in the training class. At this moment, the opportunity to provide training is at its peak. The user is motivated to learn and the training is relevant to the tasks at hand. Therefore, the organization can expect a higher retention rate.
Remote control software allows the IT professional, support technician, or instructor to show the end user how to perform an action by remotely controlling the mouse and keyboard of the end user's computer. The end user observes the procedure and then tries to imitate it while the trainer observes. This action, coupled with a phone conversation or voice communication over the network, provides quick and efficient just-in-time training at a fraction of the cost of classroom exercises. As you work with the Cost Saving Model, you'll also see how this type of training can help reduce the amount of time spent in the classroom as well.

VI. Cost Savings Model

The remainder of this white paper is devoted to a discussion of how you can analyze your own situation and the effect that remote control software might have in your organization. The financial model has been developed through many hours of discussion with companies who have faced the same problems of rising costs and shrinking budgets. Your company may have different cost structures or assumptions.

The model below is based on a fictitious company currently having one thousand employees, but growing at about 10% per year. The model projects costs, investments and potential savings out over five years. For example, this model shows how a company with one thousand people can realize savings of $3 million over five years with an investment of roughly $135,000. This represents a ROI of over 800% and a break-even period in just 4 months! This model will help you build a business case for help desk automation technologies by outlining the more visible and tangible costs. What won't be clear from this model is the value derived from increased customer satisfaction through better service or increased product revenue by allowing end users to focus on their own jobs and not on their computer problems. But don't overlook those potential areas for improving the bottom line. They are just as real, albeit less tangible.

Please contact one of our sales offices, listed at the end of this white paper, to obtain an Excel workbook model for calculating your potential ROI.

Step One: Analyze your current situation

You need to understand what you currently spend supporting PCs, the LAN and end users before you can realize the scope of potential savings through the implementation of remote control technology. Costs fall under different categories and may be managed under different budgets, but through careful analysis, you can build a financial model that not only demonstrates costs savings in your own department, but also shows how other departments can save money. In addition, you may also be able to demonstrate increased revenues by reducing the largest portion of the cost of End User Operations. If improvements at the help desk can lead to less time spent by the end user in non-revenue producing activities, then that area of hidden or indirect costs can be reduced. The model makes certain assumptions that can be easily changed to fit your own business model. To understand your own situation, you should review the following:

- **Personnel costs** - The model includes a fully burdened average cost per employee including both IS resources and end users. The $75,000 figure includes salary and benefits.

- **Call Volumes** - Assumptions are made regarding the number of calls coming into the help desk per end user per day. The model assumes that 1 out of every 20 end users require assistance at least once per day, 15 minutes is wasted per incident prior to calling the help desk, and that the average call time is 15 minutes.

- **End User Training** - We estimate that each end user spends two days per year in computer-related training activities. The is an average figure which assumes some users attend more training classes than others based on individual job requirements.

- **Help Desk Productivity** - Assumptions are made regarding the productivity of the help desk personnel themselves. We assume that each support person spends four hours per day on the phone. We also assume that the support person spends eight days per year in continuing education and training. To estimate the number of support people required, we compute the number of calls that come into the help desk each day and how many calls a single support person can answer given the number of hours spent on the phone. This results in the number of support people required to adequately staff the help desk.

- **On-Site Visits** - We assume that in a certain percent age of the calls the support person is able to resolve the end user's problem during the first phone call with out having to dispatch a costly on-site visit. On-site visits are estimated at $125, a figure more or less dependent on the proximity of the support person to the end user. If you support a remote field office, this cost could drastically increase with travel expenses.

And finally, phone and communication costs estimates are merely placeholders. Since these costs vary widely, we recommend you change these numbers to reflect your business's actual expenses.

Step Two: Investigate areas for potential cost savings

The Cost Savings Model will demonstrate potential cost savings in several key areas. Depending on your own situation, the savings may vary, but you can expect to save money through more efficient call handling, reduced dispatches of on-site visits, reduced downtime for the end user, and reduced training expenses. As mentioned previously, this model does not take into account other potential areas for savings or potential increases in revenues which may apply to your situation.

- **Call Handling Savings** - It's very likely that you will experience the most significant savings through improvements in call handling at the help desk. Through the use of remote control, you can provide faster problem resolution by reducing the time spent on the phone. For example, the Cost Savings Model assumes that a 15 minute phone call can be reduced by a third in the first year, and that through incremental efficiencies, you can further reduce this time by half of the original 15 minute estimate (Table 2). These estimates were derived through actual customer experiences. Your call times may vary depending on the complexity of the product you are supporting.

- **Reducing the Time Spent on The Phone** results in these savings: 1) reduced end userdowntime and 2) improved efficiency of the support person, thereby allowing more end users to be served in less time. You'll also see reduced phone expenses as a direct result of improvements in call handling. This will vary from company to company depending on the phone system and whether any tolls are involved in calls to the help desk, etc. But the percentage reduction in time spent on the phone will correlate directly to the percentage savings in phone expenses.

- **Reduced On-Site Visits** - The real wild card in the Cost Savings Model is in the area of reduced "on-site" visits. The potential for savings is enormous if your end users are geographically dispersed. One customer involved in the development of this white paper supports over 10,000 users throughout the United States, all connected via a TCP/IP-based network. Through the use of remote control, this customers has been able to centralize the help desk in one location and resolve a majority of support problems without dispatching a technician for an on-site visit. To date, this has result ed in a savings of over one million dollars. The Cost Savings Model assumes that the help desk is able to resolve 60% of the calls without dispatching someone to the end user's site (Table 3). Many customers have seen call resolutions increased to over 90% through the use of remote control software.

- **Reduced End User Downtime** - Assumptions regarding end user downtime are coupled with call handling efficiencies. The Cost Savings Model assumes that each call consumes 30 minutes of the end user's time: 15 minutes spent trying to fix the problem alone and 15 minutes on the phone with the help desk. It's easy to gauge the reduction in the latter through call process ing equipment. But it's more difficult to gauge how much time the user will save by knowing that the help desk has the tools to help fix the problem quickly and using them instead of tackling the problem on their own. We assume that for every minute in call handling savings, there is another minute of end user "experiment" time that is saved. As always, you can modify the model to meet your own assumptions (Table 4).

- **Reduced Training Days** - Finally, the Cost Savings Model looks at potential savings through reduced classroom training. Gartner Group believes that by implementing just-in-time training techniques, end users can spend more time doing their jobs and less time in class. Remote Control software is just one example of a tactic to achieving just-in-time training goals, so we take a very conservative approach to the amount of classroom training time saved in this case, 5%. By using this model and following it over the life of your project, you can adjust these assumptions up or down (Table 5)

Step Three: Calculate the investments required to meet your cost savings objectives

As you calculate the investments you must make to implement help desk technologies such as remote control software, it is important to remember that there are other costs to consider besides the license fees of the software itself. You should also consider the on-going maintenance fees or license fees for upgrades that may become available from time to time. For this model, we have used a "street price" of $42 per copy for Timbuktu Pro software (price per computer when purchased in 100-pack configurations). We have also included a yearly maintenance fee of $10 per license. Upgrade license fees may be higher (Table 6).

You should also consider the costs associated with deploying the software in your organization. These costs may vary widely depending on the resources at your disposal. For example, it may cost less to roll out software in your company if you have invested in software distribution technologies. You may need instead to rely on internal resources or contracted resources for installing this and other software products. We conservatively estimate that it costs $15 per computer to install remote control software based on an installation time of 20 minutes per computer and a fully burdened personnel cost of $75,000 per person.

Step Four: Analyze your cost savings and return on investment

An important part of your cost justification project is presenting the final results concerning savings and ROI to management. The standard model for this type of analysis is the ROI calculation which estimates net cash flow as the difference between cost savings and investments made throughout the year. In Year 0, the net cash flow will be negative given the investments made that year, but the pay back (break-even point) can be expected during the first year (Table 2). From that time forward, you can expect significant return on investment percentages. (The ROI percentage can be thought of as the interest rate that you would need to get from a bank on a savings account in which you had deposited an amount of money equal to your new technology investment.)

An easy way to visualize the return analysis is a graph. We've included a sample chart (Figure 1) in the Cost Savings Model that can be copied directly into your presentation. As you update the assumptions and numbers in the model, the chart will automatically reflect the changes in the ROI. The chart depicts the net cash flow line, the cost savings line and the investment line. The point at which the net cash flow line crosses the X axis (at $0 savings) is the point in which your investments have paid for themselves.

The Cost Savings Model (Table 1)

Current Situation

	Year 0	Year 1	Year 2	Year 3	Year 4
Total calls per day	50	55	61	67	73
Days Per Year	200	200	200	200	200
Mins. per call	15	15	15	15	15
Calls Closed At Help Desk	60%	60%	60%	60%	60%
Rep. Hours on Phone per day	4	4	4	4	4
Rep. Annual Days Training	8	8	8	8	8
Number of Reps required to staff Help Desk	3.25	3.58	3.93	4.33	4.76
Number of End users	1,000	1,100	1,210	1,331	1,464
End user hours lost per call	0.50	0.50	0.50	0.50	0.50
End user Annual Days Training	2	2	3	4	4
Annual Phone Charges	$12,000	$13,000	$14,000	$15,000	$16,000
Cost Per Local On-site Visit	$125	$125	$125	$125	$125
Annual Burdened cost per person	**$75,000**	**$75,000**	**$75,000**	**$75,000**	**$75,000**

Savings Analysis (Table 2)

Call Handling Savings

	Year 0	Year 1	Year 2	Year 3	Year 4
Reduced End user Call Time					
Mins. per call-Now	15	15	15	15	15
Mins. per call-w/ Remote Control	15	10	9	8	7
End user Hours saved		917	1,210	1,553	1,952
Total Savings - $		$34,375	$45,375	$58,231	$73,205
Reduced Number of Reps					
Rep Daily Hours on Phone - Now	4	4	4	4	4
Rep Daily Hours on Phone w/Remote Control		5.0	5.5	6.0	6.0
Mins. per call - Now	15	15	15	15	15
Mins. per call w/ Remote Control		10	9	8	7
Number of Reps required - Now	3.25	3.58	3.93	4.33	4.76
Number of Reps required w/ Remote Control		1.90	1.71	1.53	1.48
Total Savings - $		$125,825	$166,824	$209,515	$246,117
Reduced Phone Charges					
Percent Call Time Saved		33%	40%	47%	53%
Annual Phone Costs - Now	$12,000	$13,000	$14,000	$15,000	$16,000
Total Savings - $		$4,333	$5,600	$7,000	$8,533
Total Savings-Call Handling		**$164,533**	**$217,799**	**$274,746**	**$327,855**

Reduced On-site Visits (Table 3)

	Year 0	Year 1	Year 2	Year 3	Year 4
Calls Closed At Help Desk - Now	60%	60%	60%	60%	60%
Calls Closed At Help Desk w/ Remote Control		75%	80%	85%	90%
Number of On-sites/Year-Now	4000	4400	4840	5324	5856
Number of On-sites/Year w/ Remote Control		2750	2420	1997	1464
Cost Per Local On-site Visit	$125	$125	$125	$125	$125
Total Savings-On-site Support		**$206,250**	**$302,500**	**$415,938**	**$549,038**

Reduced Downtime (Table 4)

	Year 0	Year 1	Year 2	Year 3	Year 4
End user hours lost per call-Now	0.50	0.50	0.50	0.50	0.50
End user hours lost per call w/ Remote Control		0.40	0.30	0.25	0.20
End user hours saved per call		0.10	0.20	0.25	0.30
Total Savings-Reduced Downtime		**$41,250**	**$90,750**	**$124,781**	**$164,711**

Reduced Training Days (Table 5)

	Year 0	Year 1	Year 2	Year 3	Year 4
End user Annual Days Training	2	2	3	4	4
Reduction w/ Remote Control		5%	5%	5%	5%
End user Days Saved per Year		110	182	266	293
Total Savings-Training		$41,250	$68,063	$99,825	“$109,808
TOTAL SAVINGS		**$453,283**	**$679,111**	**$915,290**	**$1,151,412**

Investment Analysis (Table 6)

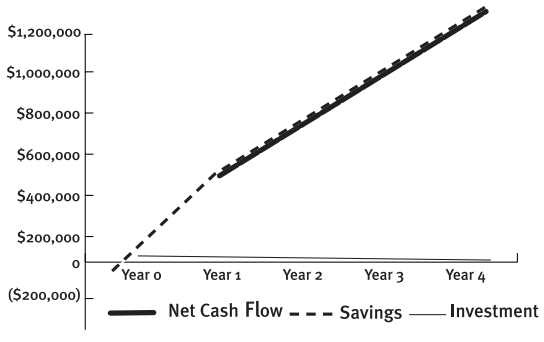
	Year 0	Year 1	Year 2	Year 3	Year 4
Software per user	$42	$42	$42	$42	$42
Software Investment	$42,000	$4,200	$4,620	$5,082	$5,590
Maintenance per user		$10	$10	$10	$10
Software maintenance		$11,000	$12,100	$13,310	$14,641
Hours required to install software	0.33	0.33	0.33	0.33	0.33
Installation / Implementation Services	$15,469	$1,547	$1,702	$1,872	$2,059
TOTAL INVESTMENT	**$57,469**	**$16,757**	**$18,432**	**$20,274**	**$22,300**

Return Analysis (Table 7)

	Year 0	Year 1	Year 2	Year 3	Year 4
Cost Savings		$453,283	$679,111	$915,290	$1,151,412
Investment	$57,469	$16,757	$18,432	$20,274	$22,300
Net Cash Flow	($57,469)	$436,526	$660,679	$895,016	$1,129,111
Accumulated Net Cash Flow	($57,469)	$379,057	$1,039,737	$1,934,752	$3,063,863
ROI %	**807.76%**				

Five Year Cash Flow Demonstrating Cost Savings From Remote Control Software

(Figure 1)



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