

Information Technology Service Provider Report



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1 Introduction

- 1.1 ABC Company has contracted with Mr. Charles Legg, of C. W. Legg Consulting to provide recommendations and observations concerning the choice of a new information technology service provider for their Any Town, Ohio headquarters. As part of this contract, Mr. Legg attended all vendor presentations concerning vendor selection and was available to answers all technology questions as put forth by the vendors and ABC Company staff concerning this project.
- 1.2 ABC Company is in the process of moving from their current location on Old Age Drive to their new location on the west side of the City of Any Town. Therefore, as part of this project, recommendations concerning technology needs involved with this move will also be addressed.
- 1.3 ABC Company is in the process of finding a technology solution to improve the speed of up-loading pictures from the field to their Widget-Soft server located at the central office in Any Town, Ohio. Recommendations will be included in this report concerning this process.
- 1.4 ABC Company, as a supplement to this project, has requested general recommendations concerning future technology needs of their company as a multi-state organization. These recommendations will be based on observations of Mr. Legg during his assignment to this project.

2 Objectives

- 2.1 Determine the best and cost effective vendor to supply information technology support for the Any Town, Ohio office of ABC Company.
- 2.2 Evaluate vendor solutions to improve the speed of up-loading pictures from the field to ABC Company's Widget-Soft server located at the central office in Any Town, Ohio.
- 2.3 Determine the best and cost effective vendor to supply telecommunications services to ABC Company at their future building location.
- 2.4 Provide general recommendations concerning information technology needs of ABC Company as a multi-state organization, including social networking and the Internet.

3 Recommendations

3.1 Vendor Selection for Managed Services

- 3.1.1 Vendor A made available three quotes for providing managed services to ABC Company. Of the three, only the Outsourcing proposal at \$10,548 a year offers any real value to the company. The Vendor B provided two quotes, Copper at \$12,000 a year and Silver at \$27,600 a year. The Copper SLA offers approximately the same support as the Vendor A Outsourcing plan, with a few improvements in response for remote services for servers and workstation (PC) computers.
- 3.1.2 Vendor A offers 2-hour response during business hours and 4-hour response outside of business hours as opposed to the Vendor B's offer of 1-hour response within business hours for workstations (PCs) and servers, and 2-hour response for servers outside of business hours. The Vendor A contract is for one year, with an automatic fee increase of 2.9 percent with each annual renewal while the Vendor B contract is month by month, cancellation with 30 days notice.
- 3.1.3 Vendor A did not provide a face-to-face presentation while the Vendor B provided two face-to-face presentations, the first on April 21, the second on April 25, 2011. This fact alone places the Vendor B ahead of Vendor A. In addition, the Vendor B offered a solution to the problem of slow uploading of pictures to the Widget-Soft server, although this is a separate proposal from the managed services proposal.
- 3.1.4 The decision is therefore not between Vendor A and Vendor B, but as to which plan to select of two offerings from Vendor B. The Copper plan deals primarily with monitoring and managing the hardware. The Silver includes a helpdesk and support of the users, but comes at almost a doubling of the cost. There was no mention within the Vendor B proposal concerning trip charges to perform on-site service. Vendor A charges \$25 per trip.
- 3.1.5 The costs associated with taking over the network (\$500), installing the Widget-Soft remote software (\$750) and setup of the new firewall (\$500) would be waived if the Silver SLA is adopted. However, there is a four (4) month minimum period before ABC Company could switch to the lower cost Copper SLA. At the second meeting with Vendor B, it was stated that there would be an additional cost outside the Silver SLA for moving and setting up the network, servers, and computers at the new location. Table 1 summarizes these costs.

Table 1 *Setup Costs on Copper SLA*

| Service | Cost |
|---|-------------------|
| Server & PC install & Configuration | \$500.00 |
| Remote Application Software Configuration | 750.00 |
| Firewall Install & Configuration | 500.00 |
| Tech Cost of Moving to New Building | 1,000.00* |
| Total | \$2,750.00 |

* Cannot find a written amount, but it was discussed at the second meeting, seem to remember around \$1,000 ± \$300.00, but not sure.

- 3.1.6 The Silver SLA includes unlimited 24x7 on-site emergency server support and unlimited 8x5 remote workstation (PC) support but comes with at an additional cost of \$15,600 per year compared to the Copper SLA.
- 3.1.7 Under the Copper SLA, the chargeable rate per hour is \$70 for desktop support and \$130 for server and LAN support. Assuming the server breaks down 4 times a year and the average service call takes 4 hours; the total annual cost for server labor would be \$2,080. Again, let us assume there are five helpdesk calls per month and each call will take 1 hour to complete; the total annual cost for remote desktop service would be \$4,200. Therefore, the total labor costs annually are \$6,280, see Table 2 for details.
- 3.1.8 Analyzing these figures it is hard to justify the additional \$15,600 in annual costs for the Silver SLA. However, you do gain the element of quick response with the Silver SLA, but as with any insurance, it is only an asset if you use it, otherwise it is a liability.

Table 2 *Estimated Annual Labor Costs*

| Item | Hours | Rate | Cost |
|--------------------------------------|---------------------|-------------|----------------|
| Server – 4 calls x 4 hours =16 hours | 16 | \$130 | \$2,080 |
| Desktops – 5 x 12 months = 60 hours | 60 | \$70 | 4,200 |
| | Annual Total | | \$6,280 |

- 3.1.9 The **recommendation therefore is to purchase the Copper SLA** and put additional funds, possibly half of the cost or more of the Silver SLA (\$640) aside each month for the specific purpose of IT labor and maintenance costs. There will be the occasional hardware or software cost for replacement parts, new computers, software updates, and printer repairs no matter which agreement you are under.

3.1.10 Highlighted below are several concerns that involve both the Copper and Silver service level agreements. Addressing these issues with the Vendor B would be advisable before signing a contract.

3.1.11 Under both service level agreements, the Vendor B does monitor to assure that backups are completed; however, they are not responsible for physically doing the backups or providing off-site or online storage of the backups. **The addressing of this critical element is very important in case of a fire, storm, or other disaster event destroys the server.**

3.1.12 The Vendor B, under either SLA, will not maintain LAN cabling, cover the moving of equipment, or the setting up of new users, or create notebook computer hard drive images. Printer monitoring or repairs are also not part of the SLA. These services will result in additional costs. The Vendor A SLA **does** cover monitoring of networked printers, but not desktop printers. Neither Vendor A nor Vendor B includes printer service in their contracts.

3.1.13 Another major concern with the Copper and Silver agreements is that the Vendor B will be the **sole provider** of all repairs of **managed** servers, desktops, laptops, printers, and network equipment. This could get expensive for simple repair jobs such as adding memory or replacing power supplies.

3.1.14 Likewise, the Vendor B is **not** responsible for any updates or upgrades of **non-Microsoft** vendor software such as Widget-Soft.

3.2 Email Services

3.2.1 ABC Company is currently using AimHigh, a web-based hosted email system, which is offered and hosted by Buzz Networks, the current service provider. The cost for AimHigh from Buzz is \$6.50 per user. Since AimHigh is hosted by Buzz, it is unlikely ABC Company will be able to continue using AimHigh, unless a new contract is initiated with Buzz Networks. Other Internet service providers offer AimHigh, but it is unlikely the cost will remain the same as it is being included with the Buzz SLA.

3.2.2 The Vendor B is proposing using Remote Exchange Email Server for \$11.00 per user. While the cost is almost double over the current AimHigh from Buzz, Microsoft Exchange Server is the de facto standard in email, calendar, and contact management within the business world. It works directly with Microsoft Outlook or a number of Web browsers.

3.2.3 Therefore the **recommendation is to switch to Remote Exchange Email Server** for several reasons. First it is a standard and will allow you to share calendars, setup meetings, and provide a standard that is guaranteed to be supported in the future. Second, without further investigation, it is unlikely you

will find another AimHigh host for the \$6.50 per user that Buzz Networks offers, unless Buzz is willing to continue to offer the AimHigh service for the same cost after you cancel their SLA contract.

- 3.2.4 Finally, if you do engage the Vendor B as your IT service provider, the Remote Exchange Email Server will be supported by them; otherwise you will have multiple vendors to deal with when there is a problem, which is never good for the customer.

3.3 Remote Widget-Soft Proposal Recommendations

- 3.3.1 Before accepting the Remote Widget-Soft proposal, the Vendor B needs to perform a demonstration using ABC Company's Widget-Soft server and at least one of the ABC Company's field computers utilizing a 3G modem connection. **This demonstration must have the logon box working.** If the demonstration does indeed improve the upload time of the pictures and other Widget-Soft data by a significant margin, then it should be a viable option to license the software from the Vendor B.
- 3.3.2 **Do not purchase the firewall or migrate to a 4G wireless network** until your decision is made concerning the contract with the Vendor B for managed services and you are completely satisfied with the demonstration recommended in item 3.3.1 above.

3.4 Telecommunication Service Provider

- 3.4.1 At the April 25, 2011 meeting with the Vendor B, Mr. Baker presented to those present a proposal from Telcom Inc, an independent telecommunication provider. This proposal offered two T-1 lines with a guaranteed bandwidth speed of 3 Mbps and the availability of twenty (20) voice over IP (VoIP) phone lines. The proposal included switching of the current analog numbers to the VoIP lines, and additional buckets of long distance minutes and voice features. The proposal adjusted cost is \$509.02 per month (\$6,108.24 annually) **before taxes**.
- 3.4.2 Due to the desire of ABC Company to move into their new building within 30 days and the common installation lead time of 30 to 40 business days for telecom services, pressure was high to resolve a solution to telecom services during the meeting.
- 3.4.3 The cost of the new service is a little more than what ABC Company is currently paying to the various Internet and telephone providers. In addition, the bandwidth offered is considerably higher than the current Road Runner plan and provides the same 3 Mbps bandwidth for both up-load and down-load services.
- 3.4.4 The only downside to the proposal is that it places all telephone connectivity

within a single interconnect, that of the two T-1 copper lines. If that single line is damaged or down for repairs, the Any Town Ohio office of ABC Company will lose all Internet and telephone communications. However, cell phones will still operate.

3.4.5 After much discussion, **it was decided to move forward with the proposal and accept the offer from Telcom Inc.** Ms. Jan Doe signed the contract and returned to Mr. Baker of the Vendor B, who will take care of the details with Telcom Inc. **A firm cut-over date is still needed for Telcom Inc.**

3.4.6 Because of the vulnerability of the possible loss of Internet and telephone services, **it is strongly recommended that some type of alternative backup plan be put in place in case of the T-1 failure.**

3.5 *Section 5, Evaluation Process* documents the findings collected in face-to-face meetings, vendor submittals, and Q & A during meetings and from emails. Please review Section 5 for a clearer understanding of how the above recommendations were reached.

4 Additional Recommendations

4.1 These recommendations are beyond the scope of this project, but are important enough to include within this report.

4.1.1 The warehouse area designated in the new building for the telecommunication and network equipment remains open to dust and fumes generated from the restoration processes conducted by ABC Company. It is highly recommended that this area be enclosed or another area chosen to protect this valuable equipment.

4.1.2 It is imperative that the development of a disaster recovery plan be established for not only for the Any Town, Ohio office of ABC Company, but for the other office locations in Kentucky, Idaho, and Texas. This will assure that company operations can continue in the event that a disaster damages any of the company's office locations.

4.1.3 Currently, ABC Company is operating as four separate businesses, at least from a technological standpoint. It is imperative that a plan be developed to pull all ABC Company locations under a single information technology policy and framework. The policy and framework should include disaster recovery, networking, data backups, and the consolidation of technology resources. By following this recommendation, not only will the company be able to function in the face of disaster, but also should lead to an overall reduction of information

technology costs for the company as a whole.

- 4.1.4 Printer recommendation: While inkjet printers are inexpensive to purchase, they are expensive to maintain due to the cost of ink cartridge supplies. Most businesses today have replaced inkjet printers with laser printers. This provides not only a cost savings in ink supplies, but allows the company to purchase a single networked color printer that is sharable by everyone in the office. Laser printers produce a cleaner output and are not subject to ink smear due to paper getting wet, the very event by your company that prompted this recommendation. A good brand name network color printer can be purchased for under \$1000, and while replacement toner cartridges are more expensive, they last hundreds of times longer than ink jet replacement cartridges, thus over time saving money.
- 4.1.5 The final recommendation is that the company's website needs reviewing and updating. By taking the time to perform this review, ABC Company will be able to improve their marketing abilities toward social networking sites.

5 The Evaluation Process

- 5.1 The client is not happy with the services of the current provider, Buzz Networking, so they are not part of this selection process. This was primarily due to poor response time and a general lack of concern for the client by the vendor. The vendors under consideration are Vendor A and the Vendor B. Vendor B presented two face-to-face presentations to the client while Vendor A only submitted a written proposal.
- 5.2 Mr. Charles Legg of Legg Consulting met with ABC Company three times. The first meeting was on March 30 to discuss the scope of the project and decide how to continue. The next 2 meetings, April 21 and 25 were to entertain presentations by Mr. Daniel Baker of the Vendor B. Additionally, Mr. Legg sent and received many emails to and from Mr. Daniel Baker of Vendor B, and Mr. Joe Smith, Ms. Jane Doe, and Ms. Mary Doe, all of ABC Company.
- 5.3 These evaluations and recommendations are solely based on information gathered during those presentations and meetings and limited research conducted by Mr. Legg.

5.4 Evaluation of Service Provider Vendor A

- 5.4.1 Vendor A provides three levels of service agreements: Monitoring, Secure, and Outsourcing. The Monitoring SLA is just that, the monitoring of PCs and Servers, with a discounted hourly charge for both off and on-site service. At \$246 per month, there is little value in this SLA as it only tells you when you need something fixed after the fact.

- 5.4.2 The Secure SLA offers only proactive health and service checks of the PCs, servers, and networks. At more than double the monitoring SLA (\$549), this SLA does not offer much more in service. Both SLAs have a \$50 per trip charge in addition to the labor and parts cost.
- 5.4.3 The Outsourcing SLA seems to be the best of the three for the cost. At \$897 per month, it is considerably more than the other two, but you receive actual service for the servers. In addition, the hourly service rate is somewhat higher, but the trip rates are half the cost (\$25 per trip), so the two charges somewhat cancel each other out.
- 5.4.4 The Outsourcing SLA specifies service level expectations of two (2) business hours for callbacks during normal business hours and four (4) hours on-site response for emergency needs. However, the SLA does not specify what constitutes an emergency. This places the decision fully on the providing vendor and not the client as to what is an emergency. It would be best to stipulate what is an emergency before these issues occur. In addition, the SLA does not stipulate what penalty would be involved if the providing vendor does not respond within the contractual time. The providing vendor should be willing to guarantee this expectation with monetary loss to them for failing to deliver.
- 5.4.5 Response times can provide additional problems for the client. As an example, what if a call for service is placed at 4:59 PM; does the response time roll over to two (2) hours the next morning beginning at 8:00 AM? This could be critical either way. Paying the employee overtime to wait for repair to be completed, or not have the computer available for first 2 to 4 hours in the morning.
- 5.4.6 All three Vendor A SLAs authorize the vendor to expense up to \$200 for repairs. Can the client purchase the parts and have Vendor A install them? What is the Vendor A markup for parts used for repairs?
- 5.4.7 The “Monthly Proactive Server Checkups” as part of the Secure SLA includes installation of Microsoft Windows service patches. Are these patches part of the SLA, or will the client be charged the SLA labor rate? It is not clear within the SLA.
- 5.4.8 Under the Secure SLA, within the “Monthly Proactive Server Checkups” it is stated the there will be a “test backup restore” completed. How is this test done and how often? The only way to assure the backup will function correctly is to back it up to the original machine. I have seen backups work on foreign machines, but fail on the original machines due to hardware issues.
- 5.4.9 What is the name and guaranteed uptime of the proposed Web-based email system? Is the proposed email system managed by Vendor A or outsourced? Does the client have access to all email upon termination of the SLA agreement

with Vendor A?

- 5.4.10 The Vendor A SLA speaks to anti-virus protection and email spam/virus filtering, but it is not clear in the SLA what the name of the anti-virus software to be used is or if the client must pay to purchase and have the software installed on the PCs and servers. In addition, there is some ambiguity concerning anti-virus software licensing. Item #13 states that the client must maintain current, managed anti-virus software licensing. Does the anti-virus software the client currently owns permit managed support? If not, are you willing to purchase the additional software?
- 5.4.11 Under the Outsourcing SLA, the terms Emergency, High, Urgent, Medium, and Low are used to classify the urgency of trouble tickets. These terms need to be defined in writing and agreed upon by both the client and providing vendor. Preferably, the client should be in control of the definitions. In addition, are there any financial penalties to the vendor for not meeting these classifications?
- 5.4.12 Under the Outsourcing SLA, it is stated that the data drives on critical systems will be monitored. How are these “critical” systems determined? Does it include critical data located on an individual’s workstation PC?
- 5.4.13 Employees using home VPN access and Internet connectivity, and other non-domain machines are excluded from the Outsourcing SLA per Exclusions, item #2. It is my understanding that the client has many employees who fall under this category as they do extensive fieldwork and are seldom in the office.
- 5.4.14 Vendor A is only obligated to manage the disposal of end-of-life hardware. They are not obligated to absorb any costs of the hardware disposal, which is the responsibility of the client.
- 5.4.15 The Vendor A SLAs cover only networked printers, not printers attached to a user’s PC. This is standard in most SLA contracts. If printers are covered, additional SLAs must be maintained.
- 5.4.16 The Outsourcing SLA (item #10) stipulates that Vendor A will automatically extend the SLA after the first year and increase the contract amount by 2.9 percent.

5.5 Evaluation of Service Provider Vendor B

- 5.5.1 Vendor B provides two service level agreements (SLA): Copper and Silver. The Copper SLA primarily takes care of hardware, while the Silver takes care of the users. In addition, the Silver SLA provides unlimited 24 x 7 on-site emergency server support and remote 8 x 5 workstation (PC) support. The Silver SLA also includes limited on board IT Projects, scheduled on-site workstation (PC)

support (6 hours per month), and periodic IT planning meetings with the client.

- 5.5.2 The Copper SLA has a \$1,000 per month cost, while the Silver is \$1,300 more for a total of \$2,300 per month. The figures reflect the current single server and 23 users. Each additional user would add \$15 to the Copper SLA and \$100 to the Silver SLA, there is no information provided for additional servers. The Copper SLA incurs a one-time \$500 fee for server and workstation (PC) configuration and setup charges. The Silver absorbs these charges. Both agreements provide Viper anti-virus software for all servers and workstations.
- 5.5.3 Under both plans, the client receives a 5 percent discount off the current hourly time and materials rates. See Table 3 for the hourly rates of labor offered under both contracts.
- 5.5.4 Mr. Baker of the Vendor B supplied Mr. Legg with a boilerplate SLA representative of the agreement offered to ABC Company. The observations and comments that follow are based on that template.
- 5.5.5 Within the Vendor B *Master Services Agreement*, heading 12, *Fees for Service: Payment Terms, Pass-Through Expenses*, it states that the client shall be responsible for any reasonable out-of-pocket expenses including travel expenses, lodging, meals, or similar expenses, which may be incurred by Vendor B in performing additional services outside the SLA.

Table 3 *Hourly Rates – All Services*

| Service | Hourly Rate |
|-----------------------------------|-------------|
| Engineer - desktop | \$70 |
| Engineer – Server & LAN | \$130 |
| Engineer – WAN & Virtualization | \$150 |
| Project Manager / App Development | \$150 |

- 5.5.6 The following observations are from the *Service Attachment* included with the *Master Services Agreement*.
- 5.5.7 Item 1.1.4 states that the client will utilize their own backup & disaster recovery (BDR) for backing up their server(s) with **no data transmitted and stored offsite**. This will necessitate that ABC Company implement their own backup system including the off-site storage of those backups. This service is not included in either of the current SLAs offered by the Vendor B.
- 5.5.8 Item 1.1.13 states that the Vendor B will monitor the availability of the client's website. This may be helpful to assure visitors can reach your website, but is not essential.

- 5.5.9 Item 1.1.15 states that the Vendor B will not maintain cable infrastructure in the server room.
- 5.5.10 Item 1.3.5 states that the agreement does not cover new user setups or moves.
- 5.5.11 Item 1.3.6 states that while the creating of images of desktop PCs are covered under the SLA, image creation for laptops and notebooks are not.
- 5.5.12 Item 1.4 is unchecked, which implies that printer management and the service of both network and desktop printers are NOT covered by this SLA.
- 5.5.13 Item 2.2 stipulates that the maintenance windows are 8:00 AM to 5:00 PM EST weekdays and 7:00 PM to 8:00 PM EST on weekends.
- 5.5.14 Item 3.3 stipulates response times will be within 60 minutes for business hours and 2 hours for after business hours. No monetary rebate is offered if these time windows are not met.
- 5.5.15 Item 5.1.3 states that the Vendor B will be the sole provider of all repairs of managed servers, desktops, laptops, printers, and network equipment. This may limit the client from seeking outside vendor services for repairs such as replacement of power supplies, hard drives, adding memory or similar maintenance.
- 5.5.16 Item 5.3.1 states the client is responsible for upgrading any non-Microsoft software, unless otherwise specifically discussed in the agreement. This would directly impact updates to Widget-Soft software on the server. This needs to be clarified.

5.6 Evaluation of Widget-Soft Remote Proposal from the Vendor B

- 5.6.1 The Vendor B's Remote Widget-Soft software presentation, given by Mr. Baker did appear to speed-up the uploading of photographs appreciably, reducing the average upload time from 45 - 60 minutes, to 3 - 5 minutes. However, there are several concerns that the demonstration presented and are covered below.
- 5.6.2 The demonstration was not real world since it used a demonstration version of Widget-Soft running on Vendor B's own server. It did not involve completing a real estimate by a ABC Company field employee, which would include not only the photographs but building sketches, client data, and estimate costs retrieved from the server database.
- 5.6.3 There was a logon bug in the first demo given on April 6, 2011. The bug keeps the user from seeing the logon screen when logging on to Widget-Soft. On the surface, this does not seem to be a show stopping issue as the user can type the

logon name and password without seeing it. Mr. Baker told us that this would be simple to fix. However when the second demo was given on April 21, 2011, the bug was still there. Once again we were told it would be simple to fix, and would be fixed before releasing the software to us. If the software engineers cannot fix this simple issue within two weeks, then I consider that a red flag.

- 5.6.4 In conjunction with item 5.6.3, Mr. Baker gave the impression during the first demonstration that Matthew Richardson of Vendor B created the software in-house. During the second demonstration, Mr. Richardson let it slip that they were outsourcing the software development. That may not be an issue, as it is common in the industry to outsource software development, but adding a third party between the client and the vendor can cause expectation and communication issues, such as the logon issue.
- 5.6.5 The impression was that Mr. Baker was not being honest in the first demo, which places suspicions on the trust worthiness of Mr. Baker and the Vendor B. However, to be fair to Mr. Baker, no one, including myself, asked the question as to who was actually developing the software. The implication by Mr. Baker was that Mr. Richardson was developing the software.
- 5.6.6 The new firewall is a good idea regardless if the Remote Widget-Soft proposal is accepted. It may speed-up the uploading of files in general, but more important, ABC Company needs it for security reasons. Your current firewall is not a commercial grade firewall, which could leave your network open to hackers. However, one point is that Mr. Baker said the Vendor B receives very good pricing on the Block Wall A100 hardware. However, the quoted price of \$1545 seems a little high (\$1100-\$1200) for the same model advertised on Internet retailer websites. There is nothing wrong with markup of hardware, but this should be addressed with Mr. Baker.
- 5.6.7 Concerning the 4G network upgrades, anything that can improve the up-loading speed of files from the field will improve the efficiency of moving the photos from the field computer to the server. It is true that a 4G wireless network is faster than 3G, but that comes with a higher cost. There are also availability issues with 4G since you must be near a 4G tower; otherwise, you are using the slower 3G infrastructure. Since ABC Company field people are often away from large cities, this may be a problem. The idea of moving all phones to a 4G network needs further investigation. There may also be other options such as dedicated data wireless providers.
- 5.6.8 The new telecomm provider, Telcom Inc, will provide a dedicated 3 Gbps upload and download bandwidth to your new building. Currently you have a very slow (<300 Kbps) upload link. It will be interesting to see if this faster upload bandwidth helps the field estimators in uploading data; but the weakest link is still the slow data upload speed of the wireless modem carriers.

- 5.6.9 The hardware and installation cost for the Widget-Soft Remote Software Solution totals \$2,795, see Table 4. In addition, there is also a recurring monthly fee of \$255, which reflects 15 concurrent licenses and one server. The term *concurrent licensing* means 15 estimators can upload reports to the server at one time, as opposed to needing a license for each field computer. Concurrent licensing is the better way to proceed if you do not expect all the estimators using the server at exactly the same time.

Table 4 *Cost of Widget-Soft Remote Solution*

| Item | Cost |
|--|------------------|
| Block Wall A100 firewall | \$1,545 |
| Firewall Installation | 500 * |
| Remote Application Software Installation | 750 * |
| Total | \$2,795 * |

* Vendor B will drop the firewall installation and software installs if ABC Company adopts the Silver managed services proposal, the only cost being then for the Block Wall A100 hardware.

6 Final Comments

- 6.1 It has been a pleasure working with ABC Company's staff in preparing this report and recommendations. I hope you will find the recommendations helpful and I look forward to working with ABC Company in the future.

Charles W. Legg, Jr.
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April 29, 2015