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300 Crescent Court
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Dallas, Texas 75201-1000

Attention: Paul Baker
Copy: Louis Grosskopf

Invoice #2948

September 3, 1999

Project: #133-79

INVOICE

Project: **Valuation of CoreData Acquisition**

Consulting Services: August 5 - 25, 1999

Burton Grad	4 days @ $2,500/day		$10,000.00
		Total Fees	**$10,000.00**
Expenses Incurred:			
Express Delivery			$90.25
		Total Expenses	**$90.25**
		Total Invoice	**$10,090.25**

Payment Is Due Within 15 Days of Receipt of Invoice

Description of RemoteWorx

RemoteWorx®

Version 3.1

Automated Backup Solutions for the Remote and Mobile Workforce

RemoteWorx is designed to provide companies with an automatic and centralized solution to desktop and mobile data backup and protection.

RemoteWorx provides multiple solutions from one technology:

- Automated data backup
- Data Retrieval & Storage
- Asset Discovery & Tracking

In order to grow, companies are expanding their mobile and remote workforces – and RemoteWorx can grow along with it

Let RemoteWorx Save You

RemoteWorx is the most economical data backup and storage software on the market. Purchase additional Client licenses *as they are needed.*

The RemoteWorx product allows remote and mobile workers to quickly transmit their backup and retrieve files from the corporate network using a byte-level technology.

What Makes RemoteWorx Different?

• Scalability

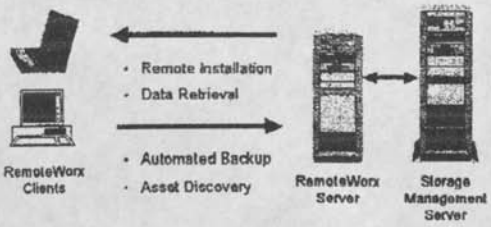
RemoteWorx is the only backup product designed for a large volume of users. The average server can handle up to 250 concurrent connections or up to 3500 users total. As your company grows, simply purchase additional RemoteWorx Client licenses and hard drive storage to continue.

• Built-In Fault Tolerance

RemoteWorx performs a self diagnostic if a problem occurs. A corrective action will be described and automatically taken, without any administrative interaction. Because of the small transmission size, Clients are never on the server long enough to create any congestion.

•Integration

Integrate RemoteWorx with existing storage management systems, such as IBM ADSM® and more. There is no need to have two separate backup systems and data storage system.



How RemoteWorx Can Help Your Company

Benefits for Users

- Maximize users time on-line – check email and send a backup transmission at the same time. Connections to the server are just long enough to drop off the data packet.
- Increase employee productivity by making the responsibility of data backup an automatic process
- Users can retrieve a specific file from a project completed one week, six months, or even a year ago

Benefits for Administrators

- In less than 2 hours, the RemoteWorx server can be up and running with 25 clients
- System configuration data from Asset Management shortens Help Desk Calls
- Automatically manage data by region, department and/or users
- Use RemoteWorx Reports to summarize hardware and software inventory and categorize file storage

Benefits for the Company

- Protect the company data – an asset just as valuable as the laptop itself
- Maximize employee time at the lowest cost
- Have an accurate inventory of company hardware and software assets

Auto Client Installer Makes It Easy!

The RemoteWorx Auto Client Installer enables network managers to quickly configure, distribute and install RemoteWorx Client software on remote and mobile PCs.

There is no need to have the user's machine physically present to set it up for a backup. The administrator can customize the settings in RemoteWorx to backup the desired data and distribute the Client software via e-mail to remote and mobile users

All users need to do it double click on the attached, self-extracting file to start protecting their data with RemoteWorx.

- Administrator configurable RemoteWorx Client options
- Fast and easy Client software distribution via e-mail
- Ensure e-mail receipt of Client software using the Return Receipt feature
- Increases Administrative control over backup process
- Provides a means for consistent, standardized Client group configurations to improve asset and data management

System Requirements

Client Requirements
Windows 95/98 or NT 4.0
486 66MHz or higher processor
8 MB RAM minimum (16MB RAM recommended)
Hard Drive: 2MB for software installation; 50MB for local revision storage recommended

Server Requirements
Windows NT 4.0
Pentium processor or equivalent
32 MB RAM

Hard Drive: 5MB for install; 1GB minimum, depending on the # of RemoteWorx Clients (guidelines in manual)

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4114 E. Wood Street, Suite #2
Phoenix AZ, 85040-1952
Phone: (602) 437-6575
Fax: (602) 437-5066

www.sterling.com

STERLING SOFTWARE

RemoteWorx 3.1 Features

♦ Byte and Block-level Backup Technology

Using byte-level technology, RemoteWorx detects changes to files, encrypts, and transmits just the "changed bytes" since the last backup. Now, block delta support has been added for faster backup of large files. Ensuring the smallest amount of data is sent reduces both transmission time and cost.

♦ Instant Data Recovery

Data may be retrieved from the server or locally (on-board storage) – a feature unique to RemoteWorx. Byte-level file revisions are compressed and stored locally so users can instantly recover lost or corrupted files–without ever connecting to the server. RemoteWorx is also designed to work with next day laptop replacement programs using simple point-and-click data restoration.

♦ Disconnected Process

Clients do not need to be connected to the server to perform a backup. When a connection to the server is made, the data is "dropped off" for the server to processes, and the client can disconnect anytime after the data is transmitted, minimizing user connection time to the server.

♦ Asset Discovery and Tracking

Hardware and software asset information is collected when the backup occurs and is automatically sent to the server. System administrators can now discover and track the configurations of the entire workforce - providing the most cost efficient help desk for remote users.

Other Features

- **RemoteWorx Client file synchronization**
- **Simple selection of Operating System special folders** – like Favorites, Templates, Desktop and many others.
- **Advanced File Include** – RemoteWorx now supports a type-in (DOS) style capture set definition. This option supports DOS wildcards * and ? in both file names and folder names.
- **Excludes Files and Folders Based on Capture Sets** – Exclusions may be made by filename or folder (including wildcards). There may be one set of excludes for a capture set and different set of excludes for another capture set.
- **Capture Set Based Server Revisioning** – RemoteWorx allows the user to control how many revisions of files backed up by this capture set are stored on the server. This is done either through the server's setting or by defining a specific value for the files in a capture set.
- **Deleted File Retention** – RemoteWorx now gives the user the ability to decide what to do with backups of files that have been deleted on the client. They can be kept indefinitely or automatically removed after a certain period of time.
- **Personality Settings** – easier to backup and restore the personality settings, such as icons, favorites, desktop shortcuts and Start Menu shortcuts in the event of a machine loss.

Description of Scalable Enterprise Server

TBSS Overview

The TBSS will perform the same basic tasks the current RemoteWorx server performs. However, with the TBSS design, it will separate these tasks onto one or more physical boxes. The use of the additional boxes is to allow the server to handle a grater load than any single box implementation. The load presented to the server can now be spread amongst the available boxes.

Fundamental goals:

- The entire server must be able to run on a single box, if required.
- The server can be sectioned into areas of specialization. These areas can be placed on different machines in order to increase the overall computing capacity of the server.
- Individual components of the server should be able to fail without impacting the overall process.
- Boxes should be able to be added or removed at will without impacting the overall process.
- The server should work just as smooth for a 100-user installation as it works for 60,000 users. CoreData will create a process where either criteria applies equally well.

TBSS Components and Respective Functions

The RemoteWorx Server software will be enhanced to contain three types of components within the TBSS solution: the System Manager, the Connection Manager and Package Manager Servers.

System Manager

- **Create users** – This will create a user, assign all the appropriate attributes such as user ID, configuration file, etc. and notify the connection servers to update any cache information they may have to authenticate users.
- **Delete users** - This will delete the user from the database of users. It will spawn a Package Manager task to transfer the users data to CD for retrieval by MCS. It will inform the Connection Managers to remove all references to the user from their user list cache.
- **Manage users** - This will perform all tasks generally related to users: move a user from one organization to another, change a user default backup configuration selection, activate/deactivate, protect/unprotect the user.
- **Create and manager backup configuration** - The backup definition editor will reside on the System Manager.
- **Monitor of machines** - This will keep a heartbeat with all components. Should a machine not respond to a heartbeat message, the System Manager will alert the RemoteWorx Administrator through whatever defined methods exist.

  Note: If the System Manager goes down and a machine fails, the Connection Managers will handle this automatically, and redirect traffic without involving the System Manager. Notification of System Manager failure will need to be developed.
- **Define machine usage** - This will manage the tasks that each component in the system should perform.
- **Administrator Notification** - When any server machine fails to respond to a heartbeat message, the System Manager will send notification to the administrator. Note: if the System

Manager fails, a notification will be sent to the administrator by one of the remaining machines.

Connection Manager

Purpose: Manage the connections from the users. Connection Manager will authenticate users in the system and then redirect the connections to Package Manager Servers employing load balance methodology.

Specific functions:

- **Accept connections from users** - The first step is to accept the connection from the client and verify the protocol is originating from RemoteWorx.
- **Authenticate users** - The connection servers will keep a mirrored copy of the master user list in memory (RAM). When the user connects, their credentials will be verified locally at the connection server. Performing local authentication allows the System Manager to perform independent of the connection load, which provides high availability, and high connection rates.
- **Redirect users to Package Manager pools** - The authentication process will direct the connection to the Package Manager this user is a member of. The connection server will keep real-time load information for each machine in the Package Manager pools. The connection server will determine which Package Manager server currently has capacity to receive a user and return to the client the IP address of the Package Manager server this user should connect to. The Connection Manager will also send a message to the Package Manager server informing the Package Manager to accept the user's connection. This later step prevents clients from connecting to the Package Manager server first and bypassing the authentication process.

Package Manager Servers

Purpose: Perform 2 basic tasks:

1. Receive / transmit files to / from the users
2. Process the packages received by the users and fulfill file restoration requests.

Specific functions:

- **Accept connections from clients** - Each time a user connects to the Connection Manager, a notification to the Package Manager server will be initiated. When the user connects to this Package Manager server, the connection is cross-referenced. If it matches up, then the user is accepted. Invalid users are rejected.
- **Support checkpoint restart** - The Package Manager servers must support checkpoint restart for both receiving and transmitting files. Since the files are stored on the protected data storage server, the re-transmission can resume from any Package Manager server.
- **Notify the Connection Manager that the user has connected** - The Package Manager server will notify the connection server that the user has connected and is currently being serviced by the Package Manager server. Should a line drop occur and the user reconnect, the Connection Manager will redirect the user to the same Package Manager server in order to clean up any files that are half transmitted. This is required for checkpoint restart to work properly.
- **Receive files from clients and store them directly to the protected data storage device** - Upon the initiation of a send file from the client, the server will open a file at the data storage server. As each packet of data is transmitted from the client, the protocol server will write the

data directly to the data storage. When the file has completed transmission, the protocol server closes the file in the data store.

- **Support line drop** - Should the line drop the Package Manager server will close the file on the data storage server – in order that checkpoint restart can pick up where this transmission left off. Upon receipt of a file from the client the Package Manager server will update a task list file that is stored on the protected data storage server. This task list contains the list of packages that will be processed by the package-processing portion of the Package Manager servers. The protocol side of the Package Manager server adds tasks to the list. The package processing side of the Package Manager server removes tasks from the list.

  Note: The protocol portion will inspect the package to determine what task the package is intended to perform. If the package is a retrieve request, then the package is placed in a special retrieve priority queue. Should the package be a backup package it is placed in the backup (lower priority) queue.

- The package processors pull tasks from the data storage server and process packages.
- The Package Manager servers create a pool of threads based on the number of CPUs on the server. The server will first go to the retrieve queue and process these retrieve requests at maximum speed prior to any backup package processing.
- When all retrieve requests are fulfilled then the package processor will turn to backup packages.
- When a package has completed processing, the server will look for a new task to begin. It always looks for retrieves first. As long as it is processing a retrieve package the server will not look for new backup packages.

  Note: If a retrieve package is dependent on a the processing of a backup package, then the needed backup package will be processed first.

The server also requires protected file storage. This is either the local hard drive for the server or a map point onto another machine.

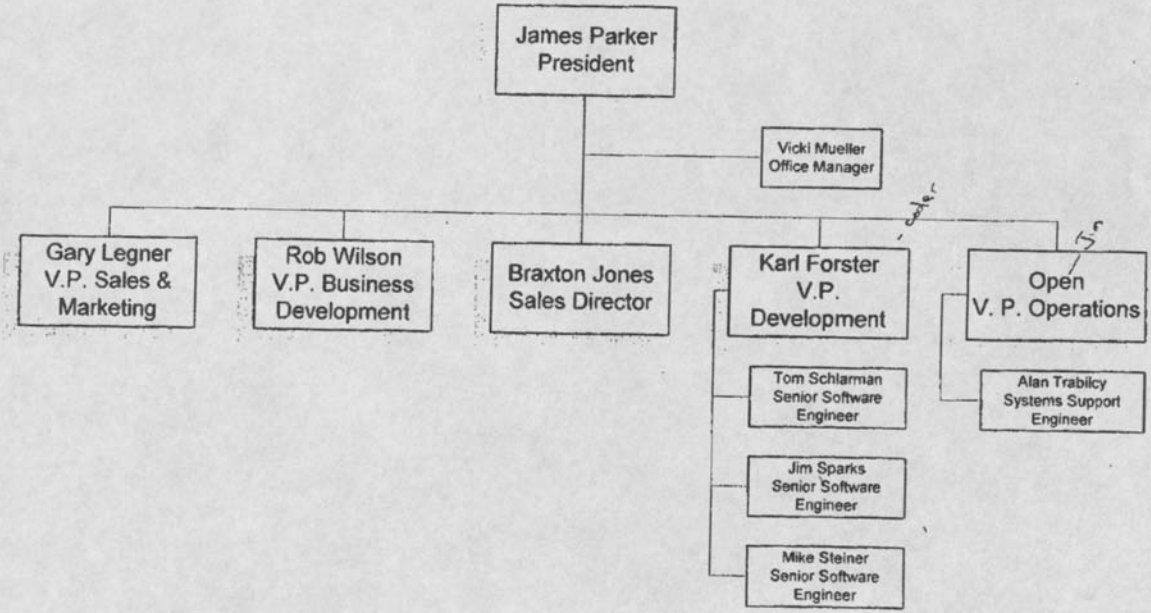
Note: If this is pointing to a different machine, we will not place any requirements on the OS of that machine. From our point of view as long as we can create, read, write, delete, and lock files on that map point, we have met a sufficiency condition. If this protected storage is a different machine (such as a Multi-Access Storage Array) then the machine we are installed on, we will not place any software on that machine. This ensures we are independent of that machine's OS.

The intention is for an administrator to begin with installing all the above components on a single machine. This would get them up and going through an initial test phase. As their needs grow, they can add machines depending on where the bottlenecks seem to be.

For the service implementation, we can start with a few machines, and grow as the user load grows. Thus as we find how our performance is, we can tune the number of boxes to the current and anticipated loads.

CoreData, Inc.

January 27, 1999



Appendix E

Core Data Financials

~~1996-1998 Pub~~

01/25/99

CoreData, Inc.
Profit and Loss
January 1996 through December 1998

	Jan - Dec '96	Jan - Dec '97	Jan - Dec '98	TOTAL
Ordinary Income/Expense				
Income				
RemoteWorx 2.1	0.00	52,576.00	520,954.94	573,530.94
Installation Services	6,465.30	0.00	45,284.16	51,749.46
MagVault	1,905.80	15,282.15	0.00	17,187.95
Maintenance	0.00	0.00	88,294.64	88,294.64
OEM/API Licensing	0.00	270,000.00	689,980.00	959,980.00
Total Income	8,371.10	337,858.15	1,344,513.74	1,690,742.99
Cost of Goods Sold				
Freight	0.00	0.00	2,385.48	2,385.48
Material	1,188.25	6,854.59	13,907.26	21,950.10
Software Sublicense	0.00	10,642.58	-10,330.17	312.41
Total COGS	1,188.25	17,497.17	5,962.57	24,647.99
Gross Profit	7,182.85	320,360.98	1,338,551.17	1,666,095.00
Expense				
Payroll Exp.	10,818.95	638,014.88	850,638.65	1,499,472.48
Fixed Costs of Goods & Services	221,985.35	0.00	0.00	221,985.35
General & Administrative	38,464.28	166,690.52	240,852.97	446,007.77
Marketing	4,694.54	54,230.22	94,545.64	153,470.40
Research & Development	228,675.86	44,596.24	4,946.35	278,218.45
Sales	7,143.19	193,683.63	100,122.15	300,948.97
State Income	50.00	0.00	0.00	50.00
Support Services	0.00	8,226.98	30,085.32	38,312.30
Total Expense	511,832.17	1,105,442.47	1,321,191.08	2,938,465.72
Net Ordinary Income	-504,649.32	-785,081.49	17,360.09	-1,272,370.72
Other Income/Expense				
Other Income				
Reimbursed Expenses	0.00	0.00	1.50	1.50
Interest Income	0.00	20,862.93	31,582.71	52,445.64
Total Other Income	0.00	20,862.93	31,584.21	52,447.14
Other Expense				
Interest Expense	8,935.15	6,920.86	422.29	16,278.30
Penalties and Late Charges	56.37	5,361.99	-1,950.82	3,467.54
Taxes	0.00	0.00	50.00	50.00
Total Other Expense	8,991.52	12,282.85	-1,478.53	19,795.84
Net Other Income	-8,991.52	8,580.08	33,062.74	32,651.30
Net Income	**-513,640.84**	**-776,501.41**	**50,422.83**	**-1,239,719.42**

(pls type)

Remote Work - Sales History

($000)	1996	1997	1998	1999 (1/1 - 8/12)
OEM				
Licenses		270	690	100
Maint		0	77	136
Service		0	~~77~~ 0	0
Total	0	270	767	236
VAR				
Licenses	2	68	521	103
Maint	0	0	11	43
Service	6	0	45	~~53~~ 28
Total	8	68	577	174
Total Rev	8	338	1344	~~788~~ 410

CORE DATA

PriceWaterhouseCoopers

Theatre Based Server Solution (TBSS)

Development Proposal

July 6, 1999

CoreData, Inc
Phoenix, AZ 85040
602-437-6575

www.coredata.com

Introduction

Over the past 10 months, CoreData and MCS have engaged in the development of functional and operational requirements for a backup strategy to support the MCS remote/mobile workforce. These requirements included the development of backup standards, processes and a backend server solution that supports the MCS Theatre Model. To date, the requirements supporting the backup standards and client functions are nearing completion, with a fully loaded pilot expected to begin in July 1999.

The purpose of this proposal is to provide PriceWaterhouseCoopers with an initial design specification of the Theatre Based Server Solution (TBSS) and a proposal for the resources necessary to develop the first stage. The requirements driving the development of the TBSS were derived from MCS's plan for deployment of the backup strategy and the estimated number of remote/mobile users worldwide. In addition, the sizing and functionality of the TBSS is based on CoreData's technology that provides disconnected processing, allowing for maximum flexibility and scalability.

The scope of this proposal will include:

- TBSS Development Project Objectives
- Design and Process Diagrams
- TBSS Overview and Components
- Functional Requirements and Specifications
- Project Funding Requirements
- Project Schedule

TBSS Development Project Objectives

The overall objective of the TBSS project is to develop an NT version of TBSS that will port to a Unix platform. The TBSS project will include 2 Phases:

Phase I

- Develop a working scalable NT backend that can be evaluated, tested and modified efficiently to meet changing or additional requirements for the backup strategy.
- Establish metrics for performance, scalability and functionality during this testing phase and additional development requirements.
- Demonstrate performance, scalability and functionality necessary to support the MCS backup strategy.

Phase II

Provide a design plan and proposal for porting the NT version to Unix, including:

- Detailed design functional plans
- New compression engine
- New differencing engine
- Encryption standards
- Funding and schedule requirements

Design and Process Diagrams

This section provides TBSS design diagrams and a brief description of design intent and capabilities.

Diagram 1 – TBSS: Single Tier Service
This diagram depicts a single tier service for a TBSS. CoreData's scalability provides the ability to initiate a TBSS with the smallest number of servers and expand according based on user population and processing demand.

Diagram 2 – TBSS: Multiple Tiered Service
This diagram demonstrates a fully implemented TBSS which provides for different levels of service. The different Multi-Access Storage Arrays represent tiers of service that could include: mirrored storage, un-mirrored, accounting systems, etc. The Intent is to provide the most efficient service level without compromising processing and storage resources.

Diagram 1

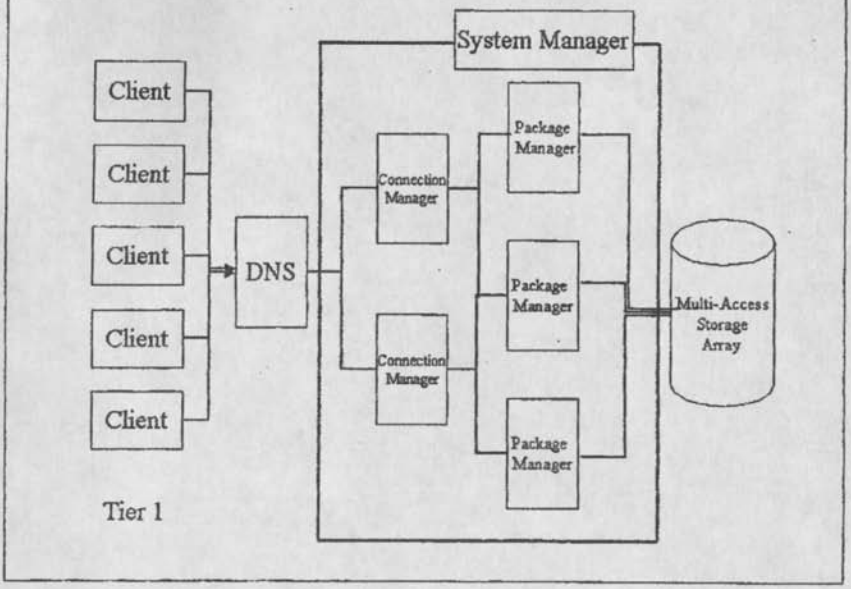
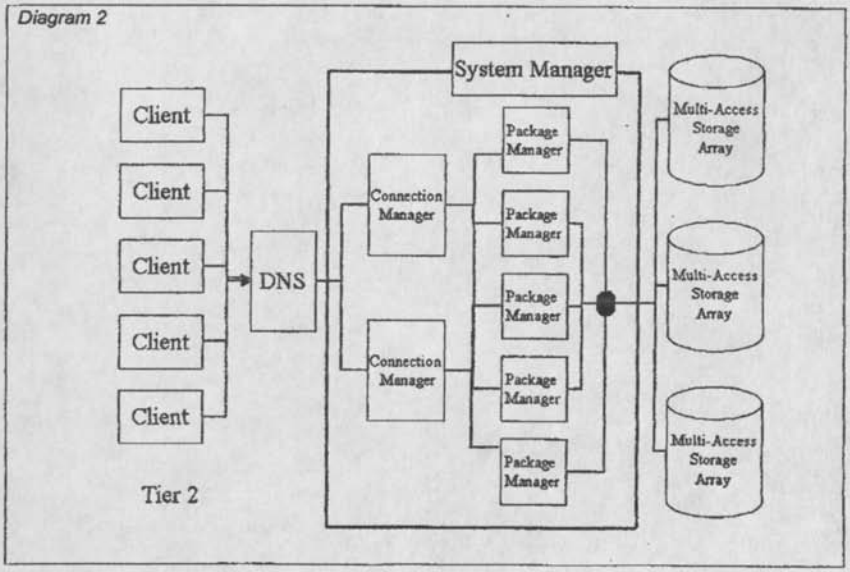


Diagram 2



TBSS Overview

The TBSS will perform the same basic tasks the current RemoteWorx server performs. However, with the TBSS design, it will separate these tasks onto one or more physical boxes. The use of the additional boxes is to allow the server to handle a grater load than any single box implementation. The load presented to the server can now be spread amongst the available boxes.

Fundamental goals:

- The entire server must be able to run on a single box, if required.
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- Individual components of the server should be able to fail without impacting the overall process.
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  Note: If the System Manager goes down and a machine fails, the Connection Managers will handle this automatically, and redirect traffic without involving the System Manager. Notification of System Manager failure will need to be developed.
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For the service implementation, we can start with a few machines, and grow as the user load grows. Thus as we find how our performance is, we can tune the number of boxes to the current and anticipated loads.

Functional Requirements and Specifications

This section provides an overview of the major functional requirements that are proposed for the development of the NT version of TBSS.

The RemoteWorx server must fulfill two long-term goals: to be both a product and a service, based on how the product is used. CoreData will develop a single implementation that fulfills both markets.

The differentiation between the server as a service and as a product will be based on certain settings and components that will be active, disabled, or deleted.

The following discusses certain topics from a high level point of view. Some of this information is repeated later from the implementation point of view.

Creating users

There will be two methods for creating users and the server will support both modes of operation, "Open / Closed".

1. Open mode: This mode allows users to be created on both the client and the server side.

2. Closed mode: This mode restricts the user creation to the server only.

The typical use of these modes will be to have the server Open during initial client rollouts. After the clients are created, the server should be placed in the Closed mode. Since the server will be directly connected to the Internet, this precludes unauthorized users from connecting to the server and causing PWC to store and manage their data.

In either mode the server will always support server side user creation. This will be performed through an API that provides basic information about a user such as:

- User Name - Must be unique across the entire server (initial release limit)
- User Password - Null if you do not want to create the password at the server
- Domain - Future reference for Domain authentication
- Email address - if you want the client software emailed to the user
- Target package UNC - The server would build a client installation kit and place it at this location
- Initial configuration - this defines the backup sets that will be preinstalled
- Group and Organization to place the new user under

Initially, CoreData will modify the current Auto Client Installer (ACI) plug-in to read a user configuration ASCII file. This file would contain the above information.

Work to be complete: The server will have an Open / Closed feature added. The ACI plug-in needs to support the additional information listed above and the user manager will need to be changed to receive this additional information.

Restoring users

There will be two methods for restoring users.

1. Restoration via connection (Online) - The user either reinstalls the client from a production CD or a clean generic client is placed on a download site, which the user first installs. Next the user runs the client, enters their User Name and Password. Then they

connect to the server, which reconstructs their user at the server and downloads to their machine. Once the process it complete the user has their client software fully restored.

2. Restoration via media (Offline) - On the System Manager machine, the administrator selects "export client data". This will prompt the administrator for which user to restore and where to place the data restored. This data builds out an installation kit with a client and that client's data. The admin can then burn this information onto a CD and mail this CD to the user in the field.

   The end user that receives the CD can run the setup program from the CD that installs the client software and all of the user files. The first time the client is run it will prompt the user for their password. This must be entered to complete the process and grant access to the files. Note: That at all locations, including the client side, the files are encrypted and cannot be accessed without the user's password.

Work to be completed: None - both of these methods are in the current product and would not need any modifications.

Package Manager Pools

A Package Manager pool is a set of Package Manager Servers (by IP address) and the location of the protected data storage to be used by this Package Manager pool. The pools provide the ability to create different groups of users and perform the processing and storage on machines dedicated to each of the various user groups.

Each Package Manager pool will consist of one or more machines and a single protected storage location for that pool. Should machines be added or removed from a pool, the connection load will balance itself amongst the available machines in the pool. The Connection Manager will monitor the pools to dynamically route users to machines based on the Package Manager Servers that are active and have capacity to service the user.

Organizations

The product has always supported the concept of an organization tree to group the users. In the 4.0 version of the server, the concept of applying backup sets as an attribute of the organization was added. A user placed under an organization will receive the backup sets that are defined for that organization and all of its parents.

With TBSS, users will be tied to Package Manager pools. This attribute will be associated to an organization. The pool associated with the organization tree that the user is placed within will service the client. The selection of the pool will be based on the parent chain in which the client is placed. First we will look at the immediate parent. If that contains a pool then we will stop and use that pool. If the immediate parent organization does not contain pool information, we will keep running up the organization list parent by parent, until we reach a pool setting, or hit the root of the organization, which must have a pool defined.

If a user is moved from one place in the organization to another, the server must take into account the potential to move the clients data from one protected data storage to another based on if the user is moved across Package Manager pools.

The terminology of each level of the organization will be generic. TBSS will allow any organization level attribute to be applied to any level in the organization. The administrator may assign physical names to the organizations. So if two-level organizations are desired where

groups are at the root and organizations are at the second level, that would be your implementation. If say, 5 levels are desired then the implementation should be generic.

Eventually, TBSS would allow user license restrictions on an organization basis. For the immediate release, this is a global setting.

Regarding the insertion/use of passwords at the organization level, this would require the administrator to type a password to gain access to a particular portion of the organization. CoreData would prefer to defer this until a later release.

Backup Profile Editors

Currently the admin client function is utilized to configure backup sets. CoreData's main goal is to create a profile editor. This editor will create, modify and manage backup sets. The fundamental difference between the profile editor and the admin client is the admin client is a modified client that is run as a separate application outside of the server. The profile editor is a component within the server. The existing admin client for creating backup configurations will be used until this feature is developed.

Task Queue Management

Each Package Manager pool will contain a task queue. This task queue is a file stored on the specific protected storage device associated with the Package Manager pool. This task queue manages the processing of packages from the clients. There will be different queues and / or priorities within the queue based on the type of package from the client. Requests from the client for file or user restoration will be placed at the top of the queue priority. Backup and user delete requests will be placed as the bottom of the queue.

When a user logins in a sends a backup package to the server, this package will be placed in the appropriate protected storage associated with the Package Manager pool that the user is a member of. The user, who sends a simple backup, can drop their backup off at the server and then drop the connection as soon as the package is received. There is no need to wait on the line while the server processes the data. Users who send file restore requests will get highest priority and they will remain on the line until their file restore request is processed.

The Package Manager Servers will establish package processing thread pools based on the number of CPUs on the Package Manager Server. These "package processing" thread pools will read the task queue to learn what work needs to be fulfilled. By storing the task queue in a common file, the Package Manager boxes can pull tasks off the queue according to their loads. If the load on the server is too great for the number of Package Manager Servers, the administrator can add a machine that can pull from this queue and dynamically help with the load.

The Package Manager Servers will balance the internal load of the machine between receiving files from the users with the package processing functions. Since package processing can be very CPU intensive, the code will prioritize user connections over package processing.

Heartbeat / Load balancing

Each Package Manager Server will periodically broadcast its current load. This broadcast will be utilized for two purposes. The broadcasts inform the other machines that each machine is still operating correctly, and by placing the current load information in the broadcast, the Connection Managers can dynamically adjust where a user's packages are redirected to per their connections.

The Connection Managers will keep track of each broadcast load message from all the Package Manager Servers. When a user logs in, the Connection Manager will authenticate the user. When the authentication process accepts the user, it will inform the Connection Manager which pool is to service that user. Next the Connection Manager will look at which Package Manager Servers are currently active within the Package Manager pool. Then it will pick a machine based on the loads stated in the Package Manager Server heartbeat broadcasts.

The load equation will redirect all users to the first machine in the pool until this machine reaches a certain percentage of load. Thereafter, load will be spread to the second machine, until both the first and second machines are at optimum capacity for user connections. The Connection Manager will redirect subsequent connections to the next available machine and so on. The goal is to leave a number of Package Manager Servers in the pool to concentrate on package processing. CoreData's lab testing has shown that package processing can significantly slow down the throughput of the users sending their packages when both operations are performed on the same machine.

Thus the optimal balance is for Package Managers to be mixed, some prioritizing user package transmission and others performing package processing. The Connection Manager will establish much of the machine level load balancing. If it sends a Package Manager Server a lot of users, that Package Manager will stop package processing and give the user file transfer all of its attention. If the Connection Manager sends a Package Manager Server very few users, then that machine will look at the task queue and concentrate on package processing.

Work to be completed: Currently the server dynamically self balances the load between package transmission and package processing within the individual Package Manager Server. The new code is for the Package Manager Servers to broadcast their load and have the Connection Manager decide which users are sent to which Package Manager boxes.

User Interface

The previous RemoteWorx 3.x user interface has everything on a main screen, with a tabbed dialog box look. The various real-time reporting features could only be displayed one at a time. The user management is a tab just as the current connectivity status is a tab. It lacks the ability to separate the task of the server from the presentation to the user.

In the TBSS all the tasks of the server are being cut up and placed on separate computers. The user interface has been componentized to follow the rest of the server. The new UI has a control panel container look. Each component of the server has a corresponding UI component. Each computer in the TBSS array will have a single UI container. Then the components installed on that particular server will present themselves within this container UI.

If a single machine is set up to perform all server tasks (one box case), the UI will contain all the components. If the server is divided among multiple machines, each machine has a container that shows what components are installed on that particular machine. Thus, a machine can be both a System Manager and a Connection Manager, or separated, combined, or cut it up at will.

Goal of multiple Package Managers Servers and multiple Connection Managers

The goal of having multiple Package Manager Servers is to have fault tolerance and scalability. If one machine fails the over all process remains intact. Machine loss could be experienced down to a single box and the server will keep running. On the other hand, if the user load grows beyond the capacity of a number of boxes currently on the server, the administrator can add more Package Manager boxes to handle the load.

Multiple System Managers

The System Manager is singular in the system. There can only be one active System Manager at a time. The server would become confused if more than one machine was creating or deleting users at the same time. A second System Manager can be placed in a hot standby position. One of them will function as the primary and the other as the secondary machine.

Inter-server communications

The servers will intercommunicate through broadcast UDP on the private network. We had experimented with pipes in the past but found the performance to be dismally slow. Most of our existing communication had been based on TCP/IP but this tends to be too point to point oriented. We have switched to broadcast UDP, such that servers tell the world what they are doing. Regardless of the number of boxes pointed towards the server (3 boxes or 30 boxes) the communication method remains the same.

Thus when a box needs to tell another box a message, it can broadcast it so not only the target recipient hears it but the target's mirrors also hears it at the same time. This will allow the server to have an unlimited number of concurrent mirror boxes running live with equal knowledge of server activities.

The overall goal is to allow machines to come and go at will, and that any number of boxes performing the same task can exist, necessitates an open communication forum for all the boxes to use. We have already coded this communication layer, and it currently seems to work just fine.

With this architecture some functions of the server can live anywhere. For example, the panel in the server that shows the current activity can show the activity for all machines, and this can be viewed equally on any machine.

Simplification is the true goal, and CoreData believes the "put anything anywhere" concept will accomplish this goal.

Project Funding Requirements

Funding for the TBSS Project, NT version of the solution described above is $150,000. The breakdown for the project includes:

- Hardware - $50,000
- Development - $100,000

The TBSS project hardware will be the responsibility of CoreData and is for TBSS, NT version implementation and testing. This proposal does not include hardware requirements specific to MCS standards. MCS may choose to utilize the NT version of the proposed hardware for on-site implementation testing.

The $150,000 project funding will be credited towards the purchase of the first block of 5,000 RemoteWorx licenses.

Once the NT TBSS version has been implemented, tested and functionality requirements approved by MCS, CoreData will develop and present a proposal for a Unix version of the approved TBSS solution.

TBSS Project Schedule

The following timeline is being proposed for development of the TBSS project in conjunction with the RemoteWorx pilot rollout.

July 2, 1999	Submit proposal to MCS
July 2 – July 23, 1999	Proposal review/comments by MCS
July 30, 1999	Proposal acceptance by MCS
August 1, 1999	Generate Purchase Order for TBSS Project
August 2 – October 1, 1999	TBSS Development and testing
October 4, 1999	Present TBSS working model to MCS
October 4 – January 7, 2000	Finalize testing / implementation requirements
January 24, 2000	Submit proposal for TBSS Unix version

~~Lotus Script~~

Remote Work - Sales History

($000)	1996	1997	1998	1/1 - 8/12 1999
OEM				
Licenses		270	690	100
Maint		0	77	136
Service		0	~~21~~ 0	0
Total	0	270	767	236
VAR				
Licenses	2	68	521	103
Maint	0	0	11	43
Service	6	0	45	~~58~~ 28
Total	8	68	577	174
Total Rev	8	338	1344	~~788~~ 410

CoreData, Inc.
Sales of Licenses, Maintenance & Service by Customer

Customer Name	Licenses			Maintenance			Service			Revenue Total
	1996	1997	1998	1996	1997	1998	1996	1997	1998	
American Technology Corp			2,500							2,500
Arizona Public Service	1,306						6,465			7,771
Bull Hn			32,650			4,063				36,713
Computing Concepts									3,500	3,500
Electronic Commerce / e-comm		1,696								1,696
Enron Energy Services									1,200	1,200
Fa-cil-i-tate		225								225
Fujitsu PC Corporation			1,275			128				1,403
Microage		50,880	473,233			6,584			40,584	571,281
RightFax			6,000			150				6,150
Stac			1,695							1,695
Sterling Commerce		270,000	689,980			77,370				1,037,350
Storage Solutions Specialists			3,600							3,600
University of Phoenix		15,057								15,057
Valley Bank of Arizona	600									600
	1,906	337,858	1,210,933	0	0	88,295	6,465	0	45,284	1,690,741

* Jim Packer will be sending info for 99.

08/12/99

CoreData, Inc.
Sales by Customer Detail
January 1 through August 12, 1999

Type	Date	Name	Memo	Qty	Sales Price	Amount	
Berbee							
Invoice	2/26/1999	Berbee	Reseller Start-Up Cost, including sales training, sales sup...	1	2,500.00	2,500.00	S
Total Berbee						2,500.00	
Brand Scaffolding							
Invoice	5/18/1999	Brand Scaffolding	RemoteWorx 2.1 Annual Software Maintenance Service	260	5.53	1,437.80	M
Total Brand Scaffolding						1,437.80	
Bull Hn							
Invoice	2/26/1999	Bull Hn	RemoteWorx 2.1 Annual Software Maintenance Service	500	9.75	4,875.00	M
Total Bull Hn						4,875.00	
Computing Concepts							
Invoice	2/26/1999	Computing Concepts	RemoteWorx Pilot Implementation Service - for AHP	1	4,500.00	4,500.00	S
Total Computing Concepts						4,500.00	
Computing Concepts, Inc.							
Invoice	1/29/1999	Computing Concept...	RemoteWorx 2.1 Server and Client License Package	200	64.35	12,870.00	N
Invoice	1/29/1999	Computing Concept...	RemoteWorx Pilot Implementation Service -	1	10,500.00	10,500.00	S
Invoice	1/29/1999	Computing Concept...	EMEA Service with 100 RemoteWorx Licenses	1	21,200.00	21,200.00	N
Total Computing Concepts, Inc.						44,570.00	
Enron Energy Services							
Invoice	3/18/1999	Enron Energy Servi...	RemoteWorx 2.1 Annual Software Maintenance Service	1,000	7.92	7,920.00	M
Total Enron Energy Services						7,920.00	
Ernst & Young							
Invoice	4/16/1999	Ernst & Young	RemoteWorx 3.0 Authorized Reseller Initial Fee	1	3,500.00	3,500.00	N
Total Ernst & Young						3,500.00	
Imation							
Invoice	5/14/1999	Imation	RemoteWorx - Private Label Changes for Imation Web Ba...	1	25,000.00	25,000.00	S
Invoice	5/14/1999	Imation	Initial Support	1	25,000.00	25,000.00	N
Total Imation						50,000.00	
InRange							
Invoice	1/25/1999	InRange	FOR CUSTOMER INVOICES	1	4,500.00	4,500.00	N
Invoice	2/8/1999	InRange	Technical training scheduled for February 1999 (as per re...	1	4,500.00	4,500.00	S
Total InRange						9,000.00	
MicroAge							
Novi, MI							
Invoice	3/30/1999	MicroAge:Novi, MI	RemoteWorx Services Provided by Core Data (installatio...	1	5,700.00	5,700.00	S
Total Novi, MI						5,700.00	
Pinacor							

CoreData, Inc.
Sales by Customer Detail
January 1 through August 12, 1999

Type	Date	Name	Memo	Qty	Sales Price	Amount
Invoice	3/3/1999	MicroAge:Pinacor	RemoteWorx 3.0 - Server and Client Software Package	25	81.95	2,048.75
Invoice	4/14/1999	MicroAge:Pinacor	RemoteWorx 3.0 Server and Client License Pack	100	70.95	7,095.00
Invoice	6/15/1999	MicroAge:Pinacor	RemoteWorx 3.0 Annual Software Maintenance	1	203.40	203.40
Total Pinacor						9,347.15
Total MicroAge						15,047.15
State of Ohio						
Invoice	7/21/1999	State of Ohio	RemoteWorx Annual Software Maintenance (for the per...	1	0.00	0.00
Total State of Ohio						0.00
Sterling Commerce						
Invoice	1/31/1999	Sterling Commerce	New #4-98 RemoteWorx 2.1 Maintenance	1	11,764.50	11,764.50
Invoice	1/31/1999	Sterling Commerce	Sterling Commerce Estimated License Royalties - Jan 99	3,300	10.00	33,000.00
Invoice	2/28/1999	Sterling Commerce	Renewal #4-98 RemoteWorx 2.1 Annual Software Mainte...	1	31,608.00	31,608.00
Invoice	2/28/1999	Sterling Commerce	Renewal #1-99 RemoteWorx 2.1 Annual Software Mainte...	1	32,932.50	32,932.50
Invoice	2/28/1999	Sterling Commerce	Sterling Commerce Estimated License Royalties - Feb 99	3,300	10.00	33,000.00
Invoice	3/31/1999	Sterling Commerce	Sterling Commerce Estimated License Royalties - Mar 99	3,300	10.00	33,000.00
Invoice	4/1/1999	Sterling Commerce	Renewal #2-99 RemoteWorx 3.0 Annual Software Mainte...	1	25,563.00	25,563.00
Invoice	4/7/1999	Sterling Commerce	New #1-99 RemoteWorx 3.0 Annual Software Maintenance	1	6,955.50	6,955.50
Credit Memo	4/16/1999	Sterling Commerce	#1-99 Adj Royalty	-1	52,510.00	-52,510.00
Credit Memo	4/29/1999	Sterling Commerce	Reimburse travel expenses	-1	1,469.97	-1,469.97
Invoice	5/30/1999	Sterling Commerce	Estimated Royalty for Q299	1	60,000.00	60,000.00
Total Sterling Commerce						213,843.53
Storage Solutions Specialists, Inc.						
Invoice	1/29/1999	Storage Solutions S...	Asset Manager for RemoteWorx for ADSM	1	417.00	417.00
Invoice	1/29/1999	Storage Solutions S...	Space Manager for ADSM	1	4,497.00	4,497.00
Invoice	1/29/1999	Storage Solutions S...	RemoteWorx 2.1 Server and 10 Client License Package	10	60.00	600.00
Invoice	3/30/1999	Storage Solutions S...	RemoteWorx 3.0	10	60.00	600.00
Invoice	5/17/1999	Storage Solutions S...	RemoteWorx Maintenance, as per contract, for SSSI cust...	1	637.50	637.50
Invoice	6/4/1999	Storage Solutions S...	RemoteWorx 3.0	10	60.00	600.00
Total Storage Solutions Specialists, Inc.						7,351.50
Strategic Decisions Group						
Invoice	3/3/1999	Strategic Decisions ...	RemoteWorx 3.0 - Server and Client Software Package	25	155.00	3,875.00
Invoice	6/15/1999	Strategic Decisions ...	RemoteWorx 3.0 - Additional Clients	300	50.00	15,000.00
Invoice	6/15/1999	Strategic Decisions ...	RemoteWorx 3.0 Annual Software Maintenance for the pe...	325	12.00	3,900.00
Total Strategic Decisions Group						22,775.00
Trophia Research						
Invoice	2/8/1999	Trophia Research	RemoteWorx 2.1 Server and 10 Client License Package	1	400.00	400.00
Invoice	2/8/1999	Trophia Research	RemoteWorx 2.1 Maintenance	2	15.00	30.00
Total Trophia Research						430.00
TOTAL						367,749.98

not adjusted
see attached

James Parker

From: Cissell, Jeff <jeff_cissell@atlanta.stercomm.com>
To: <jparker@coredata.com>
Sent: Thursday, August 05, 1999 3:02 PM
Subject: Breakdown of Royalties

The reports will be faxed to you tomorrow

The breakdown is:
Apr - Jun 99 Royalties $53,910
Apr - Jun 99 Maint on Royalties $4,951.50
Cal Year Q3 Maint on Existing Base $23,811
$82,672.50

Actual

$60,000 estimated for Q299 royalty

Not in report

Not in report

Sterling Commerce just announced they are divesting us..

Take care.
Jeff
Jeff Cissell
Managed Systems Division
Sterling Commerce (Southern), Inc.
jeff_cissell@stercomm.com
PH 770.551.3256
FX 770.399.8033

1/1/99 - 8/12/99

OEM royalties - 100K
maint - 136K
236K

Total Rev 384K
+ 28 maint
- 6 royalty
406K

VAR - 174K
NBS
maint

ConeData

Back up for 2 cpt calculation

9/17/99

Scalable Server Project -

- 5/17/99 - Initiation
  - signed contract with ConeData
  - cpt specified
- initial discussions on scalable server in 12/98
- work started beginning 6/1/99 focused on Imation prototype
- could have met 9/30/99 DATE date if focus had not been on Imation delivery

per Jim Powler

per Karl Fowler

		Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Sal/mo										
4.5K	Sr Design/Eval	.5	.5	.25	.25	0	.5	.5	.5	.5
6.0K	Sr Prog/Des	.25	.75	.5	.5	.5	1.0	1.0	1.0	1.0
7.5K	Prog	0	0	1.5	1.5	1.5	2.0	2.0	2.0	2.0
5.0K	other Doc/Eng Testing (QA)						.5	.5	.5	.5
							.25	1.0	1.0	1.0
		7.5	7.5	3.75	3.75	0				
		2.5	2.5	5.0	5.0	5.0				
		10.0	15.0	10.25	11.25	11.25				
		25.0		20.0	20.0	16.25				
										56.25

Rapid Application Development

31 pp

CoreData

0% cpt.

Subj: **FW: R&D for CoreData**
Date: 8/12/99 5:26:00 PM Eastern Daylight Time
From: Louis.Grosskopf@sterling.com (Grosskopf, Louis)
To: burtgrad@aol.com ('Burt Grad')

File: R&D for CoreData.xls (15872 bytes)
DL Time (50666 bps): < 1 minute

Burt, I received this from Jim - it essentially is the total costs ever up until the acquisition, including a forerunner product that essentially was the prototype for RemoteWorx. The cost going forward is essentially a calculation of the delivery dates - today multiplied by the salaries.
I faxed across the 99 revenues earlier.
Louis

only want cost from SES project - + ~~for~~ and salaries for all active people

—Original Message—
From: James Parker [mailto:Jim.Parker@sterling.com]
Sent: Thursday, August 12, 1999 2:16 PM
To: Chris.Gahagan@sterling.com
Cc: Louis.Grosskopf@sterling.com
Subject: R&D for CoreData

- FAS&6 date / effort / cost
- GA date / effort / cost

If you have any questions, give me a call.

———— Headers ————
Return-Path: <Louis.Grosskopf@sterling.com>
Received: from aol.com (rly-zc02.mail.aol.com [172.31.33.2]) by air-zc02.mail.aol.com (v60.25) with ESMTP; Thu, 12 Aug 1999 17:26:00 -0400
Received: from ns.san-bernardino.sterling.com ([199.2.45.6]) by rly-zc02.mx.aol.com (v60.25) with ESMTP; Thu, 12 Aug 1999 17:25:46 -0400
Received: ns.san-bernardino.sterling.com
id AA28076; Thu, 12 Aug 1999 14:30:39 -0700
Message-Id: <8BD3F0E7E4E2D2118B3C0008C7F351E215D98B@san-bernardino.sterling.com>
From: "Grosskopf, Louis" <Louis.Grosskopf@sterling.com>
To: "'Burt Grad'" <burtgrad@aol.com>
Subject: FW: R&D for CoreData
Date: Thu, 12 Aug 1999 14:25:43 -0700
Mime-Version: 1.0
X-Mailer: Internet Mail Service (5.5.2448.0)
Content-Type: multipart/mixed;
boundary="—_=_NextPart_000_01BEE509.3BED3400"

Jim Parker
602 - 437 - 6575

MagVault Contractors	Employee	Contractor	Amount
Chase, Dave		X	$20,180.00
GCSS Software		X	$89,484.77
IPSE DIXIT Software		X	$73,111.53
Magerkurth, Steve		X	$31,038.55
Nevrona Designs		X	$41,637.50
Total MagVault			$255,452.35
RemoteWorx Employees			
Buffington, Michael	X		$4,425.00
Clark, Frances	X		$19,974.64
Forster, Karl	X		$242,587.83
Lima, George	X		$70,000.00
Schlarman, Tom	X		$153,893.13
Sparks, James	X		$87,108.75
Steiner, Michael	X		$62,012.56
Total RemoteWorx			$640,001.91
Total R&D Salary and Contracts for CoreData			$895,454.26

Dennis Yosenlieb.
Jim Pawlen
Steve Hartman

D/o cut
8/13

SCI 214K — $237K — SCI
Royalty 54 (cut 60) ←
Maint 28+

358
+23
481

174K — VAR

SCI - 70K clients

+ PWC, + Monsanto
+ Imation $43/client > 7K cust - $1M
+ EMC(?) $35/ " > 75K "
+ services $15/client & Imation
maint $7.50/client

3 US - OEM's
Int - OEM's

fort Gansch rate

<10 processing services - U.S.
longer oem opportunity outside U.S.
(Japan, etc)

D/o cut

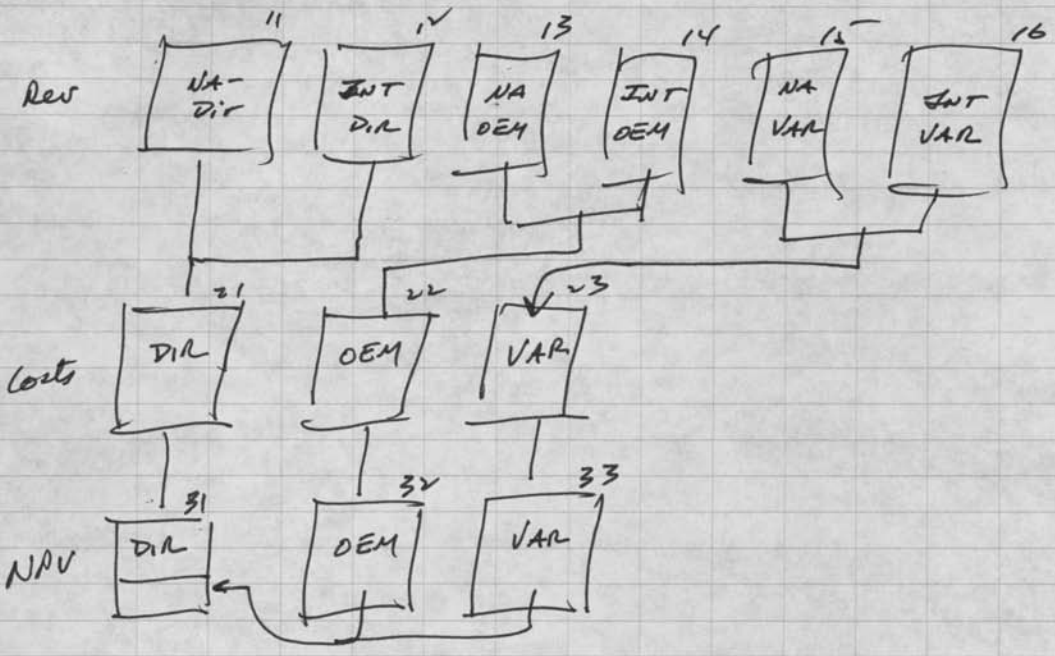
Scalable Server

June - ~~Aug~~ ...	2 * 1/3 (Sr)	acquisition
July - Acq.	2 * 2/3 (Sr)	
Aug	2 * 1 (Sr)	FAS86.
Sept	2 * 1 (Sr)	
Oct	2 * 1 (Sr)	

Effort for all other features/capability

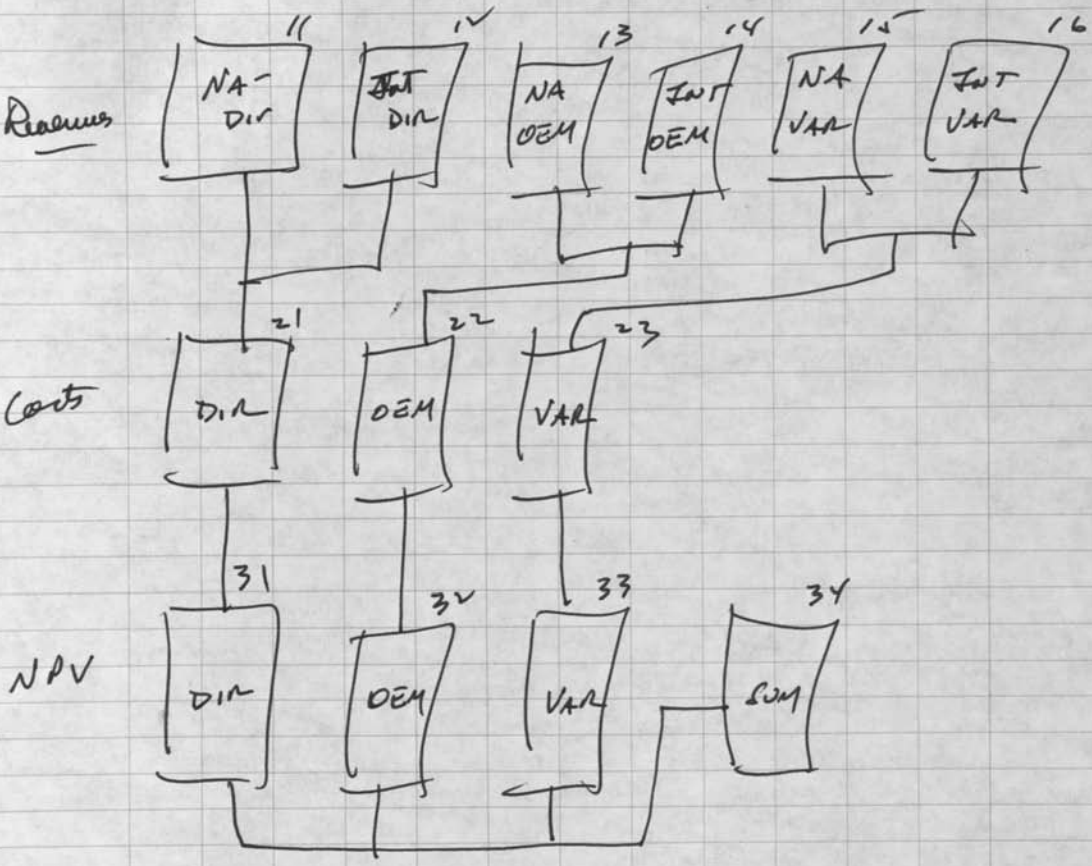
ComData - Europe <Genesis> 40% discount
only pd $3K to ComData

Fig F


Rev
11
NA-Dir
12
INT DIR
13
NA OEM
14
INT OEM
15
NA VAR
16
INT VAR
Costs
21
DIR
22
OEM
23
VAR
NAV
31
DIR
32
OEM
33
VAR

Appx H

Core Data



BURTON GRAD ASSOCIATES, INC.
101 POST ROAD EAST, WESTPORT, CONNECTICUT 06880
(203) 222-8718 FAX: (203) 222-8728
E-MAIL: BURTGRAD@AOL.COM

FAX TRANSMISSION

Date: 8/18/99

To: Paul Baker

From: **Burton Grad**

No. of Pages including cover: 1 + 3

Attached is the Executive Summary of the Core Data Valuation Report. I plan to complete the full report next Tuesday (8/23) when my secretary returns from vacation. Please call me at 203-222-8718 if you have any questions. I'm also sending a copy to Louis Grosskopf to give to Bryan Urquhart.

Revenue	163065	209000 target
Adjusted NPV - ($000)		1.282
NPV	14 900	19104
Core Tech rate. 40~~6~~		.406
Core Tech Value	6049	7756
~~Adj~~ Adj NPV	8851	11348
Tech rate	.423	.423
Tot Adj NPV	3744	4.800

Actual

add 464 Revenue

Direct	119	73%	130	62%	135	2820 3067
OEM	15	9%	30	14%	29	660
VAR	29	18%	50	24%	44~~57~~	951 ~~1160~~
	163	100%	260	100%	~~218~~ ~~207~~ 197	~~4870~~ ~~4611~~ 4431

non-ent.

3164
3066
6230

Core Tech

~~4015~~ 3794
~~3829~~ 3492
~~8044~~ 7286

Francis Granchard
Jim Parker
Steve Harriman

Sales History
8/13

SCI 214K – $237K — SCI
Royalty 5% (net 60) ←
Maint 25+

first new product

38
+23
61

174K — VAR

SCI – 70K clients

+ PWC, + Monsanto

+ Imation $43/client > 25K unit – $1M
+ EMC(?) $35/ " > 75K "

3 U.S. - OEM's
Int - OEM's

+ services
maint — $15/client & Imation
$7.50/client

fast growth rate

<10 processing services - U.S.
larger oem opportunity outside U.S.
(Japan, etc)

% cut

Scalable Server

June – ...
July – Acq.
Aug
Sept
Oct

2 * 1/3 (Sr)
2 * 2/3 (Sr)
2 * 1 (Sr)
2 * 1 (Sr)
2 * 1 (Sr)

acquisition
FAS86.

Effort for all other features/capability

ComData - Europe <Genesis> only at $3K to ComData
40% discount

SSI/SMG
Core Data

CoreTech Contrib

6/16/99

Mkt Weightings

	Initial	Revised 6/17
Scalable Server - Session - Plug - System	25%	25%
User Interface	20%	18%
client BU	15%	15%
Client Inst	~~8~~ 12%	12%
Scalable Server - Fault Tolerant	~~10~~ 8%	7%
Server -	~~3~~ 3%	3%
Client -	~~3~~ 3%	3%
Reporting -	~~4~~ 4%	4%
Misc - (5)	10%	2% each 10%
	~~100%~~ 100%	3%
		100%

International Language

Function/Technologies	Function Availability in RemoteWorx	Reuse in New Product	Market Significance	RemoteWorx Technology Contribution	Market Weighting Factor	Core Technology Contribution Value
Server Platforms					3%	.03
Windows NT 4.x	Full	Code	High	100%		
Windows2000	~~N/A~~ Full	~~N/A~~ code	High	100%		
Client Platforms					3%	.03
Windows95	Full	Code	High	100%		
Windows98	Full	Code	High	100%		
Windows NT 4.x	~~Partial~~ Full	Code	High	100%		
Windows 2000	~~N/A~~ ~~Partial~~ Full	Code	High	100%		
Scalable Server					25%	.075
Session Manager	Partial	Code	High	50%		
~~Dist~~ Cache	N/A	—	High	0		
Package Manager	Partial	Code	High	70%		
Worker Pools	N/A		High	0		
Groups	Partial	code	~~High~~ Medium	60%		
System Manager	N/A		High	~~100~~ 0%	8%	0
Backup Profile Mgr	Partial	Code	High	25%		
Fault Tolerance	N/A		High	0		
Inter-Server Comm	N/A		High	0		
Heartbeat Service	N/A		High	0		
Load Balancing	N/A		~~High~~ Medium	0		
Performance Monitor	N/A		~~High~~ Medium			
User Interface					20%	.08
Client	~~Full~~ Partial	Code	High	70%		
Server	~~Full~~ Partial	Code	High	15%	2%	.02
Asset Mangement	~~Partial~~ Full	Code	~~Moderate~~ Medium	100%	3%	.003
Reporting	Partial	None	High	10%	15%	.135
Client Backup / Restore						
Delta Engine Technology	Full	Code	High	100%		
File System Traversal	Full	Code	High	100%		
File System Filtering	Full	Code	High	100%		
Componentize Client Functionality	Partial	Code	~~Moderate~~ Medium	70%		
Package Transfer	Full	Code	High	90%		
Client Installation/Configuration					12%	.024
Auto Client Installer	Partial	Code	High	50%		
Web Based Client Installer	N/A	—	High	0		
Centralized on Server	Partial	Code	High	30%		
Interface for E-Commerce Support	N/A	—	High	0		
Application Aware	N/A	—	High	0	2%	.01
Server Installation/Configuration	~~Full~~ Partial	Code	~~High~~ Medium	50%		
VNE Integration						0
Server Reporting	N/A		~~High~~ Medium	0		
Asset Reporting	N/A		~~Moderate~~ Medium	0		
User Reporting	N/A		~~High~~ Medium	0		0
Alexandria Integration	N/A		Medium	0		
	N/A		Medium	0		

Legend

Market Value

High	Crirical to customer buying product, would not buy without it
Medium	Valuable to customer buying product, but lack of it would not preclude the purchase, though in combination with other mediums could be a purchase stopper
Low	Limited significance, nice to have, but would not pay for it

Function

Full	Product feature is available in the specified release to the extent needed to satisfy market expectation
Partial	Product feature is available but does not fully satisfy market expectation
N/A	Product feature is essentially not implemented (e.g. not available)

Product Releases

RemoteWorx 3.1	Existing Product, released July 1999
SAMS:Lifeline 4.0	Product name for redesigned, next generation product, Scalable Server
SAMS:VNE	~~Existing SCW Product will be integrated with Lifeline~~
SAMS: Alexandria	~~Future SCW Prodct will be integrated with Lifeline~~

Product element / Product features/ technologies	Market Value	Function RemoteWorx	Reuse in Lifeline	
Server Platforms				
Windows NT 4.x	High	Full		
Windows2000	High	N/A		
Client Platforms				
Windows95	High	Full		
Windows98	High	Full		
Windows NT 4.x	High	Partial		Currently no support for NT ACLs
Windows 2000	High	N/A		Currently no support for Windows2000 ACLs
Scalable Server				
Session Manager	High	Partial		
DNS Cache	High	N/A		
Package Manager	High	Partial		
Worker Pools	High	N/A		
Groups	High	Partial		
System Manager	High	N/A		
Backup Profile Mgr	High	Partial		
Fault Tolerance	High	N/A		
Inter-Server Comm	High	N/A		

Heartbeat Service	High	N/A	
Load Balancing	High	N/A	
Performance Monitor	High	N/A	
User Interface			
Client	High	Full	Partial
Server	High	Full	Partial
Asset Mangement	Moderate	Partial	Partial
Reporting	High	Partial	Partial
Client Backup / Restore			
Delta Engine Technology	High	Full	Full
File System Traversal	High	Full	Full
File System Filtering	High	Full	Full
Componentize Client Functionality	Moderate	Partial	Partial
Package Transfer	High	Full	Partial
Client Installation/Configuration			
Auto Client Installer	High	Partial	
Web Based Client Installer	High	N/A	
Centralized on Server	High	Partial	
Interface for E-Commerce Support	High	N/A	
Application Aware	High	N/A	
Server Installation/Configuration	High	Full	Partial
VNE Integration			
Server Reporting	High	N/A	N/A
Asset Reporting	Moderate	N/A	N/A
User Reporting	High	N/A	N/A
Alexandria Integration			
Disaster Backup	High	N/A	N/A
HSM Functionality	High	N/A	N/A

International Language Support
Single Byte
Double Byte

NA - Low
Int - High
NA - Low
Int - High

Partial
N/A

35 %
0

Legend

Market Value

High	Cririca to customer buying product, would not buy without it
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Product Releases

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SAMS:Lifeline 4.0	Product name for redesigned, next generation product, Scalable Server
SAMS:VNE	Existing SSW Product will be integrated with Lifeline
SAMS: Alexandria, SAN	Future SSW Prodct will be integrated with Lifeline

Product element Product features/ technologies	Market Value	Function RemoteWorx	Reuse in Lifeline	
Server Platforms				
Windows NT 4.x	High	Full	Full	
Windows2000	High	Full	Full	
Client Platforms				
Windows95	High	Full	Full	
Windows98	High	Full	Full	
Windows NT 4.x	High	Partial	Full	Currently no support for NT ACLs
Windows 20000	High	Partial	Full	Currently no support for Windows2000 ACLs
Scalable Server				
Session Manager	High	Partial	Partial	
DNS Cache	High	N/A	??? We do not do anything with DNS	
Package Manager	High	Partial	Partial	
Worker Pools	High	N/A	None	
Groups	High	Partial	Partial	

Subj: **FW: Lifeline Valuation.xls**
Date: 8/16/99 12:53:29 PM Eastern Daylight Time
From: Louis.Grosskopf@sterling.com (Grosskopf, Louis)
To: burtgrad@aol.com ('Burt Grad')

File: Lifeline Valuation.xls (13824 bytes)
DL Time (50666 bps): < 1 minute

Burt, I think we have enough here for us to get closure on this during the phone call. Most things are still High, but we can fix that.

Louis

—Original Message—
From: Karl Forster [mailto:Karl.Forster@sterling.com]
Sent: Friday, August 13, 1999 4:25 PM
To: Helmuth Klemm; Louis.Grosskopf@sterling.com
Cc: Chris.Gahagan@sterling.com
Subject: Lifeline Valuation.xls

Dear Louis,

I have attached my edited version of your valuation spreadsheet. Please note that, I changed some of the existing values under the "Function RemoteWorx" category.

Hope this helps,

Karl Forster

———— Headers ————
Return-Path: <Louis.Grosskopf@sterling.com>
Received: from aol.com (rly-yg01.mail.aol.com [172.18.147.1]) by air-yg04.mail.aol.com (v60.25) with ESMTP; Mon, 16 Aug 1999 12:53:29 -0400
Received: from ns.san-bernardino.sterling.com ([199.2.45.6]) by rly-yg01.mx.aol.com (v60.25) with ESMTP; Mon, 16 Aug 1999 12:53:13 -0400
Received: ns.san-bernardino.sterling.com
id AA29393; Mon, 16 Aug 1999 09:58:06 -0700
Message-Id: <8BD3F0E7E4E2D2118B3C0008C7F351E215D99F@san-bernardino.sterling.com>
From: "Grosskopf, Louis" <Louis.Grosskopf@sterling.com>
To: "'Burt Grad'" <burtgrad@aol.com>
Subject: FW: Lifeline Valuation.xls
Date: Mon, 16 Aug 1999 09:53:09 -0700
Mime-Version: 1.0
X-Mailer: Internet Mail Service (5.5.2448.0)
Content-Type: multipart/mixed;
boundary="—_=_NextPart_000_01BEE807.D19E9A40"

System Manager	High	N/A	Partial
Backup Profile Mgr	High	Partial	Partial
Fault Tolerance	High	N/A	Partial
Inter-Server Comm	High	N/A	None
Heartbeat Service	High	N/A	None
Load Balancing	High	N/A	Partial
Performance Monitor	High	N/A	None
User Interface			
Client	High	Full	Partial
Server	High	Full	Partial
Asset Mangement	Moderate	Full	Full
Reporting	High	Full	Partial
Client Backup / Restore			
Delta Engine Technology	High	Full	Full
File System Traversal	High	Full	Full
File System Filtering	High	Full	Full
Componentize Client Functionality	Moderate	Partial	Partial
Package Transfer	High	Full	Partial
Client Installation/Configuration			
Auto Client Installer	High	Partial	Partial
Web Baed Client Installer	High	N/A	None
Centralized on Server	High	Partial	Partial
Interface for E-Commerce Support	High	N/A	None
Application Aware	High	N/A	Partial
Server Installation/Configuration	High	Full	Partial
VNE Integration			
Server Reporting	High	N/A	N/A
Asset Reporting	Moderate	N/A	N/A
User Reporting	High	N/A	N/A

Alexandria Integration			
Disaster Backup	High	N/A	N/A
HSM Functionality	High	N/A	N/A

Subj: **FW: Lifeline info**
Date: 8/12/99 4:11:36 PM Eastern Daylight Time
From: Louis.Grosskopf@sterling.com (Grosskopf, Louis)
To: burtgrad@aol.com ('Burt Grad')

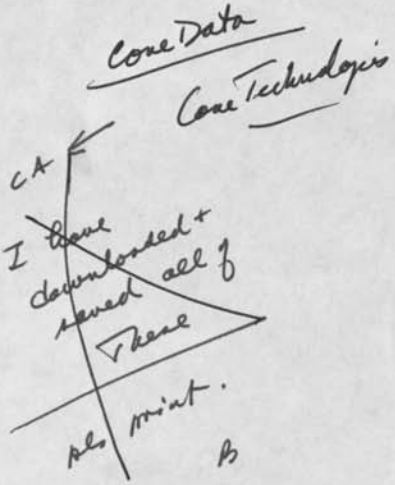
File: lifelineval.xls (20480 bytes)
DL Time (50666 bps): < 1 minute

odd.. resend

—Original Message—
From: Grosskopf, Louis
Sent: Thursday, August 12, 1999 11:13 AM
To: 'Burt Grad'
Subject: Lifeline info

Burt,
I have received this from Chris Gahagan - it is not final, but I figured you could get the basic content into your report. The major functional areas I am in agreement with, what is outstanding is commentary from Karl on some of the reuse of technology.

Louis



① Too many high market values - need to differentiate + apply percentages for primary ~~for~~ elements

———— Headers ————
Return-Path: <Louis.Grosskopf@sterling.com>
Received: from aol.com (rly-zd03.mail.aol.com [172.31.33.227]) by air-zd02.mail.aol.com (v60.25) with ESMTP; Thu, 12 Aug 1999 16:11:36 -0400
Received: from ns.san-bernardino.sterling.com ([199.2.45.6]) by rly-zd03.mx.aol.com (v60.25) with ESMTP; Thu, 12 Aug 1999 16:11:16 -0400
Received: ns.san-bernardino.sterling.com
id AA26465; Thu, 12 Aug 1999 13:16:10 -0700
Message-Id: <8BD3F0E7E4E2D2118B3C0008C7F351E215D986@san-bernardino.sterling.com>
From: "Grosskopf, Louis" <Louis.Grosskopf@sterling.com>
To: "'Burt Grad'" <burtgrad@aol.com>
Subject: FW: Lifeline info
Date: Thu, 12 Aug 1999 13:11:13 -0700
Mime-Version: 1.0
X-Mailer: Internet Mail Service (5.5.2448.0)
Content-Type: multipart/mixed;
boundary="—_=_NextPart_000_01BEE4FE.D3CDC8BC"

② need to discuss reuse in Lifeline 4.0 of each technology

Louis G —

Info needed —

- 99 License / Maint / Service info. (Paulsen)

Steve Harriman
- new product:
  - unit pricing
  - maint %
  - retention %
  - services ratio
  - merge growth (add-ons) ~~Upgrades~~

Chris Gallagher
- ~~state~~ core tech contrib

Chris Gallagher
- devel plan (+ actual)

email
- retained employees
- customer base — no value?

		NA	Intl	
3.2	OEM	✓	—	
	VAR	✓	✓	← new sales
	Direct	✓	✓	
4.0	OEM	✓	✓ (low)	
	VAR	✓	✓	
	Direct	✓	✓	

NOTE:

1) Bryan will have the acquisition costs tomorrow, as well as the retained employee details
2) The revenue projections included in this package do not split OEM vs direct, we may to have to review past run rates and apply a percentage split.
3) Jim Parker in Phoenix is gathering 1999 data to match the 96-98 license sales information that is included.

Thanks
Louis

how about future VAR's

any basis for International sales ?

Core Data

Retained Emps.

Subj: **Retained Employee information**
Date: 8/11/99 1:26:29 PM Eastern Daylight Time
From: Louis.Grosskopf@sterling.com (Grosskopf, Louis)
To: burtgrad@aol.com ('Burt Grad')

File: Employee Category.doc (19968 bytes)
DL Time (50666 bps): < 1 minute

Attached as per Bryan

Louis

I downloaded this file pls print

---------- Headers ----------
Return-Path: <Louis.Grosskopf@sterling.com>
Received: from aol.com (rly-za02.mail.aol.com [172.31.36.98]) by air-za01.mail.aol.com (v60.25) with ESMTP; Wed, 11 Aug 1999 13:26:29 -0400
Received: from ns.san-bernardino.sterling.com ([199.2.45.6]) by rly-za02.mx.aol.com (v60.25) with ESMTP; Wed, 11 Aug 1999 13:26:03 -0400
Received: ns.san-bernardino.sterling.com
id AA02129; Wed, 11 Aug 1999 10:30:56 -0700
Message-Id: <8BD3F0E7E4E2D2118B3C0008C7F351E215D976@san-bernardino.sterling.com>
From: "Grosskopf, Louis" <Louis.Grosskopf@sterling.com>
To: "'Burt Grad'" <burtgrad@aol.com>
Subject: Retained Employee information
Date: Wed, 11 Aug 1999 10:25:51 -0700
Mime-Version: 1.0
X-Mailer: Internet Mail Service (5.5.2448.0)
Content-Type: multipart/mixed;
boundary="—_=_NextPart_000_01BEE41E.93B08FBA"

Employee Category	No. of Retained Employees	Average Monthly Salary*	Learning Period (months)	Recruiting Cost (% of Annual Salary)	% Usage of Recruiting
Sales/Marketing	2	14,584	4	20	75
Senior Technical	1	14,584	4	20	75
Other Technical	3	6007	3	20	75
Services	1	4334	2	20	75
F & A	1	2917	1	20	25
Total	8				

*Salary is PEI

8/25/99

To Do

- Core Data – Final Report <need appendices>
- ✓ Blackhawk – Final Report
- Spectrum Logic – Revised Report ≤ F, H, J | other app. Report
- Info Adv – new forecasts, core tech, % cut costs, NPV
- SCI/Cadex – non disclosures, assignments/schedules, matls
- Tangent –
- SCI/Roger –
- Interlink – Tax Rates ?

SMD – Lifeline Forecasts by SMD

($000)	FY00	FY01	FY02	FY03	FY04
No. America					
NSS	5850	4918	7225	10,852	15,735
Maint	547	831	1490	2815	3357
Total N.A.					19,092
Intl					
NSS - Europe	1400	2400	3600	4650	5700
~~Maint~~	~~100~~	~~261~~	~~535~~	~~873~~	~~1300~~
Asia	1150	1226	2270	3250	4350
Lat Am	280	400	750	1066	1450
Total	2830	4026	6620	10966	11500
Maint - Europe	100	261	535	873	1300
Asia	100	133	337	610	888
Lat Am	6	43	111	200	312
total	206	437	983	1683	2600
Total Intl					14100
Grand Total					33192

SMD – N. AMERICA

STORAGE MANAGEMENT DIVISION
5 YEAR PLANNING ANALYSIS - FY98 / FY99 / FY00 / FY01 / FY02 / FY03 / FY04

Unix/NT Back Up Products	FY96	FY97	FY98	FY99E	FY99P	FY00P	FY01P	FY02P	FY03P	FY04P	% Growth 97 vs. 96	% Growth 98F vs. 97	% Growth 98P vs. 97	% Growth 99 vs. 98F	% Growth 99 vs. 98P	% Growth 00 vs. 99	% Growth 01 vs. 00	% Growth 02 vs. 01	% Growth 03 vs. 02	% Growth 04 vs. 03
NSS																				
SAMS:Alexandria Unix				4,018	3,557	9,440	9,616	10,760	12,067	13,515	0%	0%	0%	0%	-11%	165%	2%	12%	12%	12%
SAMS:Alexandria NT						3,598	4,803	10,595	17,251	25,014	0%	0%	0%	0%	0%	0%	33%	121%	63%	45%
SAMS:Lifeline				300	300	5,850	4,918	7,225	10,852	15,735	0%	0%	0%	0%	0%	1850%	-16%	47%	50%	45%
Total NSS	-	-	-	**4,318**	**3,857**	**18,888**	**19,337**	**28,580**	**40,170**	**54,264**	0%	0%	0%	0%	-11%	390%	2%	48%	41%	35%
Maintenance																				
SAMS:Alexandria Unix				1,054	871	2,619	2,752	3,451	4,211	4,927	0%	0%	0%	0%	-17%	201%	5%	25%	22%	17%
SAMS:Alexandria NT						73	577	1,325	2,669	4,270	0%	0%	0%	0%	0%	0%	690%	130%	101%	60%
SAMS:Lifeline				6	6	547	831	1,490	2,315	3,357	0%	0%	0%	0%	0%	9017%	52%	79%	55%	45%
Total Maintenance	-	-	-	**1,060**	**877**	**3,239**	**4,160**	**6,266**	**9,195**	**12,554**	0%	0%	0%	0%	-17%	269%	28%	51%	47%	37%

STORAGE MANAGEMENT DIVISION
EUROPE DIVISION - 5 YEAR PLANNING ANALYSIS - FY98 / FY99 / FY00 / FY01 / FY02 / FY03 / FY04

Unix/NT Back Up Products	FY96	FY97	FY98	FY99F	FY99G	FY00P	FY01P	FY02P	FY03P	FY04P	% Growth 97 vs. 96	% Growth 98F vs. 97	% Growth 98P vs. 97	% Growth 99 vs. 98F	% Growth 99 vs. 98P	% Growth 00 vs. 99	% Growth 01 vs. 00	% Growth 02 vs. 01	% Growth 03 vs. 02	% Growth 04 vs. 03
NSS																				
SAMS:Alexandria Unix				426	1,305	3,700	3,567	4,823	6,552	8,845	0%	0%	0%	0%	206%	184%	-4%	35%	36%	35%
SAMS:Alexandria NT						1,500	1,913	4,590	9,758	16,101	0%	0%	0%	0%	0%	0%	28%	140%	113%	65%
SAMS:Lifeline					250	1,400	2,400	3,600	4,650	5,700	0%	0%	0%	0%	0%	460%	71%	50%	29%	23%
Total NSS	-	-	-	426	1,555	6,600	7,880	13,013	20,960	30,646	0%	0%	0%	0%	265%	324%	19%	65%	61%	46%
Maintenance																				
SAMS:Alexandria Unix				55	155	261	924	1,395	2,030	2,842	0%	0%	0%	0%	182%	68%	254%	51%	46%	40%
SAMS:Alexandria NT						101	290	835	2,029	3,246	0%	0%	0%	0%	0%	0%	187%	188%	143%	60%
SAMS:Lifeline						100	261	535	873	1,300	0%	0%	0%	0%	0%	0%	161%	105%	63%	49%
Total Maintenance	-	-	-	55	155	462	1,475	2,765	4,932	7,388	0%	0%	0%	0%	182%	198%	219%	87%	78%	50%

STORAGE MANAGEMENT DIVISION

ASIA PACIFIC DIVISION - 5 YEAR PLANNING ANALYSIS - FY98 / FY99 / FY00 / FY01 / FY02 / FY03 / FY04

Unix/NT Back Up Products	FY96	FY97	FY98	FY99F	FY99P	FY00P	FY01P	FY02P	FY03P	FY04P	% Growth 97 vs. 96	% Growth 98F vs. 97	% Growth 98P vs. 97	% Growth 99 vs. 98F	% Growth 99 vs. 98P	% Growth 00 vs. 99	% Growth 01 vs. 00	% Growth 02 vs. 01	% Growth 03 vs. 02	% Growth 04 vs. 03
NSS																				
SAMS:Alexandria Unix				234	451	823	1,861	2,597	3,058	3,547	0%	0%	0%	0%	93%	82%	126%	40%	18%	16%
SAMS:Alexandria NT						377	1,318	2,984	5,837	9,923	0%	0%	0%	0%	0%	0%	250%	126%	96%	70%
SAMS:Lifeline						1,150	1,226	2,270	3,250	4,350	0%	0%	0%	0%	0%	0%	7%	85%	43%	34%
Total NSS	-	-	-	234	451	2,350	4,405	7,851	12,145	17,820	0%	0%	0%	0%	93%	421%	87%	78%	55%	47%
Maintenance																				
SAMS:Alexandria Unix				64	56	82	360	619	940	1,269	0%	0%	0%	0%	-13%	46%	339%	72%	52%	35%
SAMS:Alexandria NT						48	177	539	1,273	2,164	0%	0%	0%	0%	0%	0%	269%	205%	136%	70%
SAMS:Lifeline						100	133	337	610	988	0%	0%	0%	0%	0%	0%	33%	153%	81%	62%
Total Maintenance	-	-	-	64	56	230	670	1,495	2,823	4,421	0%	0%	0%	0%	-13%	311%	191%	123%	89%	57%

h

STORAGE MANAGEMENT DIVISION

LATIN AMERICA OPERATIONS - 5 YEAR PLANNING ANALYSIS - FY98 / FY99 / FY00 / FY01 / FY02 / FY03 / FY04

Unix/NT Back Up Products	FY96	FY97	FY98	FY99F	FY99P	FY00P	FY01P	FY02P	FY03P	FY04P	% Growth 97 vs. 96	% Growth 98F vs. 97	% Growth 98P vs. 97	% Growth 99 vs. 98F	% Growth 99 vs. 98P	% Growth 00 vs. 99	% Growth 01 vs. 00	% Growth 02 vs. 01	% Growth 03 vs. 02	% Growth 04 vs. 03
NSS																				
SAMS:Alexandria Unix				-	107	1,200	776	1,169	1,310	1,467	0%	0%	0%	0%	0%	1021%	-35%	51%	12%	12%
SAMS:Alexandria NT						1,200	425	956	2,091	3,764	0%	0%	0%	0%	0%	0%	-65%	125%	119%	80%
SAMS:Lifeline						280	400	750	1,066	1,450	0%	0%	0%	0%	0%	0%	43%	88%	42%	36%
Total NSS	-	-	-	-	107	2,680	1,601	2,875	4,467	6,681	0%	0%	0%	0%	0%	2405%	-40%	80%	55%	50%
Maintenance																				
SAMS:Alexandria Unix				-	1	39	117	232	376	432	0%	0%	0%	0%	0%	3800%	200%	98%	62%	15%
SAMS:Alexandria NT						2	49	166	420	609	0%	0%	0%	0%	0%	0%	2350%	239%	153%	45%
SAMS:Lifeline						6	43	111	200	312	0%	0%	0%	0%	0%	0%	617%	158%	80%	56%
Total Maintenance	-	-	-	-	1	47	209	509	996	1,353	0%	0%	0%	0%	0%	4600%	345%	144%	96%	36%

CoreData — new product fcst

8/12/99

Re Steve Harriman

Unit Price – $110/client – Direct – N.A.
any price reduction for volume (over 1000 clients) $50/client.

+25% Intl
$100/client
2000 clients = 200K

avg. $80/client
2000 clients
240K

$25/client – OEM – NA + Intl

$60/client – VAR. – +25% Intl

Maint – 10.9% of Unit Price – Direct

10.9% – OEM

10.9% – VAR

used 10% NA + Intl

Services – fixed/sale – Direct – 10% for NA, 5% for Intl

0 – OEM – 0%

small – VAR – 0 %

Add-ons

10%/year – Direct – 10% NA + Intl

10% – OEM – 20%/yr NA + Intl

15% – VAR – 15%

Typical sale

$250K – Direct – used 240K NA – 200K-INT

500K – OEM / NA – 500K (few cust) – 400K-Intl

30K – VAR – NA – 30K – 40K Intl

100% retention
85% renewal

~~Fault~~ SSI/SAO/Comdata
valuation

8/9/99

per Chris Gahagan
Louis Gronkoff

Remote Work —

net language capability

SAMS: lifeline 3.2 (remote + no bike)
Backs up laptops to server —
uses Delta method - at Byte/Block level
Server recognizes file, but retains changes
Server is NT only
Client is Windows 98, 95, NT
connects — TCP/IP - preferred
- dial-up - to be eliminated
- Xcellenet protocol (SCI)
<~~Fault~~ SCI divesting itself
XNet>
oem accounts (large # of clients, but ~~small~~ 50% of revenues in '97

current version to be terminated -- 1 to 2 yrs

client - software will be unchanged

Server - more code + more complex.
~~than~~ than current version and than client

SAMS: lifeline 4.0 (scalable, Enterprise Server)
Scalability --

functions
- Receive pkgs from clients
- Processes pkgs against files
- Secondary storage migration
- User configuration
- Restore

These pieces can run multiple on separate servers —
focus on receivers
security piece must be scalable

addl. functions
- Fault Tolerance
- server mgt

cont'd

add functions -

- ~~simplify~~ increase client side configurator capability (user simplification)
- SAMS: cheetah support (Alexandria)
- SAMS: VNE integration

IMATION delivery - 11/99 - OEM offering
and ~~Server~~ Server based ~~Site~~ - in ~~Price Waterhouse~~ processing Services & ~~Price Waterhouse~~ Coopers
productized revenue - 2/00 - General availability
direct + SCI

Customers - <100
Servers - 500
clients - 15,000

=>

development plan -
cont to acq. date.
acq to FAS 86
FAS 86 to Gen Avail

~~Intelligent~~ CoreData.com

=

customer Base - probably no contrib to SAMS sales (consider Kaleidoscope)
retained revenue
acq. cost picture
potential server/server back-up opportunity

=

Bi directional - local recovery

8/5/99

916-463-8520
Steve Harriman — fcstg, pricing

- Karl Foster - tech
- Chris Crapagan ~~Gerhagen~~ - devl
- Bryan Urquhart - fin
- Louis Gronkowski - ~~Fin~~ Devl

7/26 - closing

Adj cost 14M
1.5M
15.5M -- Estimate

ZPR+D
30% - $5M

Enterprise
Scalable Server. - replaces RemoteWorx

reengineering & run on multiple host
repackaging
help communicate

[client is unchanged]

ships - 2/00 Scalable Server

RemoteWorx - Server: NT/
Stats: Lifeline

FAS86 - 1-2 mos.

3-4 mos working on Scalable Server

7/

NEWS RELEASE

STERLING SOFTWARE COMPLETES COREDATA ACQUISITION

RemoteWorx joins SAMS storage management product portfolio.

DALLAS, TX, July 30, 1999 – Sterling Software, Inc. (SSW-NYSE), a leader in end-to-end enterprise storage management, today announced that it has completed the acquisition of CoreData, Inc., a developer and supplier of backup software for remote and mobile PCs, in a cash acquisition. Other terms of the transaction were not disclosed.

With the acquisition, Sterling Software adds CoreData's RemoteWorx product to its SAMS product portfolio. Sterling Software's SAMS storage management products help ensure that mission-critical storage systems are continuously available. RemoteWorx provides remote and mobile PC users with centralized data management, remote asset discovery and reporting technology. CoreData's employees have joined the company's Storage Management Division.

"We are thrilled to add this technology to our other enterprise storage management products," said Sterling L. Williams, president and chief executive officer of Sterling Software. "It answers a crucial demand by our customers for increased ability to protect the critical corporate data that resides on laptops and on remote PCs. Our customers include some of the largest data centers in the world, and by enabling them to extend the reach of corporate data backups to include mobile and remote PCs, we are delivering on our promise to provide end-to-end enterprise data protection."

Sterling Software is a leading provider of software and services for the application development, information management, systems management and federal systems markets. The company is ranked among *Business Week's* 1998 "Info Tech 100" as one of the world's best performing information technology companies. Headquartered in Dallas, Sterling Software has a worldwide installed base of more than 20,000 customer sites and 3,700 employees in more than 90 offices worldwide. For more information on Sterling Software, visit the company's Web site at www.sterling.com.

Financial Analysts:
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Sterling Software, Inc.
(214) 981-1000
Julie.kupp@sterling.com

Business Media:
Cindy Foor
Sterling Software, Inc.
(214) 981-1000
cindy.foor@sterling.com

Industry Media and Analysts:
Nadara Craun
Sterling Software, Inc.
(916) 463-8500
nadara.craun@sterling.com

Subj: **RE: CoreData Valuation**
Date: 8/10/99 5:35:01 PM Eastern Daylight Time
From: steve.carey@sterling.com
To: Burtgrad@aol.com

Yes.

—Original Message—
From: Burtgrad@aol.com [mailto:Burtgrad@aol.com]
Sent: Tuesday, August 10, 1999 11:34 AM
To: Steve.Carey@sterling.com
Subject: CoreData Valuation

To: Steve Carey
From: Burt Grad

Should I use 38% for U. S. and 30% for International tax rates for CoreData valuation as well as for IA?

———————— Headers ————————
Return-Path: <steve.carey@sterling.com>
Received: from rly-yb03.mx.aol.com (rly-yb03.mail.aol.com [172.18.146.3]) by air-yb04.mail.aol.com (v60.18) with ESMTP; Tue, 10 Aug 1999 17:35:00 -0400
Received: from ns.corp.sterling.com (ns.corp.sterling.com [198.4.58.6]) by rly-yb03.mx.aol.com (v60.18) with ESMTP; Tue, 10 Aug 1999 17:34:55 -0400
Received: ns.corp.sterling.com
id AA22775; Tue, 10 Aug 1999 16:33:15 -0500
Message-Id: <9B2A26DBF9E4D111958100805FA79114C2BAF3@corp.sterling.com>
From: steve.carey@sterling.com
To: Burtgrad@aol.com
Subject: RE: CoreData Valuation
Date: Tue, 10 Aug 1999 16:34:50 -0500
Return-Receipt-To: steve.carey@sterling.com
Mime-Version: 1.0
X-Mailer: Internet Mail Service (5.5.2448.0)
Content-Type: text/plain;
charset="iso-8859-1"

SSI / Core Data

Subj: **RE: CoreData Restructure/Reorganization Costs**
Date: 8/10/99 1:47:01 PM Eastern Daylight Time
From: Bryan.Urquhart@sterling.com (Urquhart, Bryan)
To: Burtgrad@aol.com ('Burtgrad@aol.com')
CC: Louis.Grosskopf@sterling.com (Grosskopf, Louis), Michelle.McDonald@sterling.com (McDonald, Michelle)

Burt,

Answers noted below...

1. Purchase price - $14M

2. Value of acquired assets - $197,515
   Value of acquired liabilities - $ 88,500

3. Not that I am aware of at this point.

If you need anything else, please do not hesitate to call.

Regards,

–Bryan

—Original Message—
From: Burtgrad@aol.com [mailto:Burtgrad@aol.com]
Sent: Tuesday, August 10, 1999 9:34 AM
To: Bryan.Urquhart@sterling.com
Subject: Re: CoreData Restructure/Reorganization Costs

To: Bryan Urquhart
From: Burt Grad

1. What was the asset purchase price?

2. What was the value of the acquired tangible assets and tangible liabilities?

3. Besides the restructure and reorganization costs are there any other adjustments which will affect the overall value of the acquired intangible assets?

Please e-mail or fax these answers as soon as you can.

———— Headers ————
Return-Path: <Bryan.Urquhart@sterling.com>
Received: from aol.com (rly-zd01.mail.aol.com [172.31.33.225]) by air-zd04.mail.aol.com (v60.18) with ESMTP; Tue, 10 Aug 1999 13:47:01 -0400
Received: from ns.san-bernardino.sterling.com ([199.2.45.6]) by rly-zd01.mx.aol.com (v60.18) with ESMTP; Tue, 10 Aug 1999 12:46:08 -0400
Received: ns.san-bernardino.sterling.com

SAMS:

control your world

Restructure Costs

▪ Transition employee costs (P1, L1)		$ 90K
▪ Severance (H1, M1, C1)		$143K
▪ Travel, meetings etc...		$250K
• Planning, announcement, launch meetings, Int'l		
▪ Move costs (relocation to new facility)		$ 25K
▪ Write off of existing FF&E (NBV)		$ 85K
▪ Voice/data lines + equipment		$ 10K
▪ A/R Reserve		$ 20K
	Total	$621K

Reorganization Costs

▪ Employee relocations		
• W1, J1 to Sacramento		$175K
▪ Recruitment costs (M2)		$ 85K
▪ Sabbatical, vacation, sick accruals		$ 10K
▪ New collateral, stationery etc...		$ 35K
	Total	$305K

Coredata
several development plans for products

Subj: **FW: Coredata Info**
Date: 8/12/99 5:36:12 PM Eastern Daylight Time
From: Louis.Grosskopf@sterling.com (Grosskopf, Louis)
To: burtgrad@aol.com (Burt Grad)

File: Labs RemoteWorx Presentation1.ppt (86016 bytes)
DL Time (50668 bps): < 1 minute

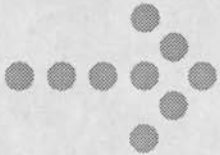
I am not sure if Steve sent you the product roadmap, it is included in this presentation that came out of the planning

Louis

> —Original Message—
> From: Gahagan, Chris
> Sent: Thursday, August 12, 1999 2:34 PM
> To: Grosskopf, Louis
> Subject: Coredata Info
>
> Louis,
>
> Here is the Labs stuff that has the Lifeline roadmap.
>
> <<Labs RemoteWorx Presentation1.ppt>>
>
> Chris

———— Headers ————
Return-Path: <Louis.Grosskopf@sterling.com>
Received: from aol.com (rly-zc02.mail.aol.com [172.31.33.2]) by air-zc02.mail.aol.com (v60.25) with ESMTP; Thu, 12 Aug 1999 17:36:12 -0400
Received: from ns.san-bernardino.sterling.com ([199.2.45.6]) by rly-zc02.mx.aol.com (v60.25) with ESMTP; Thu, 12 Aug 1999 17:35:49 -0400
Received: ns.san-bernardino.sterling.com
id AA28268; Thu, 12 Aug 1999 14:40:41 -0700
Message-Id: <8BD3F0E7E4E2D2118B3C0008C7F351E215D98C@san-bernardino.sterling.com>
From: "Grosskopf, Louis" <Louis.Grosskopf@sterling.com>
To: "'Burt Grad'" <burtgrad@aol.com>
Subject: FW: Coredata Info
Date: Thu, 12 Aug 1999 14:35:43 -0700
Mime-Version: 1.0
X-Mailer: Internet Mail Service (5.5.2448.0)
Content-Type: multipart/mixed;
boundary="—_=_NextPart_000_01BEE50A.A1C4C616"

STERLING SOFTWARE



CoreData Integration

Labs Planning
July 1999

SAMS: Storage Management from Sterling Software

control your world.

Product release assumptions

- All Internet features added in 4.0 are done by contractors
- A QA Engineer is hired by 10/1/99
- Two Software Engineers are added by 1/1/99

SAMS:

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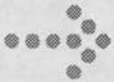
RemoteWorx - Development Roadmap

▪ Release 3.2 - Sterling Version	GA 09/01/99
▪ Release 3.9 - Scalability	GA 11/01/ 99
▪ Release 4.0 - Ease of use	GA 02/00
▪ Release 4.5 - Sophisticated healing	GA 07/00
▪ Release 5.0 - Non-redundant storage	GA 02/01
▪ Release 6.0 - Potential market opportunities	GA 07/01

control your world.

RemoteWorx 3.2 - Sterling Version - 09/1/99

- **Company and product name changes**
  - User interface
  - Documentation/Help
- **Copyright changes**
- **User Interface**
  - Splash Screen
  - Icons
- **Internationalization**
  - Single byte



control your world.

RemoteWorx 3.9 - Scalability - 11/01/99

- **Remote Backup**
  - Scalability
  - Fault tolerance
  - Simplified client configuration
  - Common file system view

SAMS:

control your world.

RemoteWorx 4.0 - Ease of use - 02/00

- **Ease of Use**
  - Predefine initial client configuration at server installation time
    - Wizard configuration for MS Office, MS Outlook, Notes, Lotus suite
  - Web based automated client installation (ACI)
    - pre-defined installation
- **Remote Backup**
  - Improve scheduling capabilities
- **Server space management**
  - Cheetah engine
- **Reports**
  - Operational reports
  - Harvest data for external manipulation and presentation

SAMS:

control your world.

RemoteWorx 4.5 - Sophisticated healing - 07/00

- **Ease of use**
  - Enable third party software distribution
  - Using non-RemoteWorx user administration to deploy and manage RemoteWorx users
    - Use existing LDAP server for deployment
    - Use existing domain authentication
- **Remote Backup**
  - Automated "at home" versus "on the road"
  - Continuous real-time backup
- **Healing**
  - Point in time recovery
    - Back to last backup
    - Selecting specific (point in time)
- **Reports**
  - Administrative activity reports
  - Harvest additional data for external manipulation and presentation

SAMS:

control your world.

RemoteWorx 5.0 - Non-redundant storage - 2/01

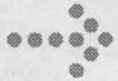
- **Remote Backup**
  - Intelligent application support
    - Outlook
    - Notes
- **Healing**
  - Non-redundant global user backup
- **Internationalization**
  - DBCS Support
- **Asset Management**
  - Asset discovery

SAMS:

control your world.

RemoteWorx 6.0 - Potential market opportunities - 07/01

- **Ease of use**
  - Collaboration through common repository
    - Sharing files between users
    - Sharing files between machines owned by the same user
  - Automated file distribution
- **Remote Backup**
  - Removing data from RemoteWorx server
  - User quotas
  - RemoteWorx server on Unix platforms
- **Disaster Recovery**
  - Bare Metal Restore
  - Delta restore after ghosting



control your world.

RemoteWorx 6.0 - Potential market opportunities continued….

- Healing
  - Selective Mirroring
  - Roll a client back to previous configuration
  - Re-personalize machine after general ghosting
  - Configuration information and change tracking
- Asset Management
  - Reports

SAMS:

control your world.

SAMS Products complimenting RemoteWorx

- **Alexandria 4.50**
  - Backup RemoteWorx Servers
    - Small volume implementation using NAS
    - Large volume implementations using Transoft SAN solution
- **Cheetah**
  - Providing Storage Space Management of RemoteWorx Servers
    - Backup/Restore
    - HSM
    - Delta archiving
- **VNE 5.5**
  - Reports
    - Analysis
    - Asset Management

CoreData

Memorandum of Acquisition

June 21, 1999

Revision 1.2

Table of Contents

1) Executive Summary

Overview of Opportunity

CoreData, formed in 1996 is a Phoenix, Arizona based startup company that produces RemoteWorx - a product specifically for backup and recovery of remote and mobile user systems. As the deployment of laptops approaches 50% of all corporate PCs, an ever increasing amount of computing is done on the road or at home by mobile/remote workers, many of who carry valuable data that is prone to loss through breakage, theft and user inflicted (software) damage. These users typically use low bandwidth connections making it impractical to use conventional backup products that move entire files and therefore large amounts of data resulting in lengthy connect times. Products like RemoteWorx, purpose built for low bandwidth connections, monitor for new/modified files and send only the portions of the files that have changed to a centralized server. The Internet is frequently used as a connection medium.

In the case of RemoteWorx, operation of the product occurs in the background transparent to the user. The changed data deltas are sent automatically when a connection to the network is made, thus protecting the users from forgetting to initiate a backup operation.

Analysts and press alike are stating that remote/mobile backup will be a significant new product segment with annual growth rates in excess of 100% per year predicted. The majority of mainstream Enterprise Backup companies have either acquired or partnered to offer this capability, most often as part of a packaged suite. Sterling Software is building an 'End-to-End' product suite, one end of which is the remote/mobile user. To date, Sterling Software does not have a product to address the segment; CoreData's RemoteWorx will fill this opening in the SMD product stable.

RemoteWorx will be integrated with SAMS:Alexandria and SAMS:Vantage Network edition, the SMD distributed systems product offerings, and sold by the SMD direct sales force either separately or as part of a solution. Additionally, CoreData has significant OEM relationships with Sterling Commerce and Imation as well as a reseller network that would be retained.

It is also seen that a hybrid of the existing technology can be the basis of a remote server backup product that is efficient on low bandwidth connections, moving only the changed data, as opposed to all the data. As the distance that Storage Area Networks (SAN) can span is limited, there will still be SAN to SAN connection bandwidth issues, opening a market for such an offering.

RemoteWorx operates over the Internet and via OEM is the basis of a new web based backup service that Imation, a 3M company, is setting up. Having RemoteWorx will not only move SMD more into Internet based products today, the option to set up a Sterling Software web based backup service in the future exists as well.

In summary, it is recommended that CoreData be acquired. Standalone, it represents a viable business in a new market segment. More importantly, Remoteworx fits in well in SMD's strategies to offer an end-to-end solution as well as broaden its reach through OEMs and alliances.

Financial Summary

STERLING SOFTWARE INC. **Model : Most Likely Scenario**
Systems Management Group
Storage Management Division - Core Data Acquisition Business Plan

WORLDWIDE REVENUE SUMMARY	Q4 FY99	FY00	FY01	FY02	FY03	TOTAL
North America NSS	500	4,150	6,018	8,725	12,652	32,045
International NSS	-	1,300	2,925	5,119	7,166	16,510
North America Consulting/Training	-	-	-	-	-	-
TOTAL WORLDWIDE NSS	**500**	**5,450**	**8,943**	**13,844**	**19,818**	**48,555**
North America Maintenance	6	269	831	1,490	2,315	4,911
International Maintenance	-	59	438	984	1,684	3,165
TOTAL WORLDWIDE MAINTENANCE	**6**	**327**	**1,270**	**2,474**	**3,999**	**8,077**
North America Consulting/Training	**-**	**-**	**-**	**-**	**-**	**-**
DIVISION REVENUE SUMMARY						
North America NSS	500	4,150	6,018	8,725	12,652	32,045
North America Maintenance	6	269	831	1,490	2,315	4,911
Total North America Revenue	506	4,419	6,849	10,216	14,967	36,956
NSS Royalties	0	455	1,024	1,792	2,508	5,779
Maintenance Royalties	0	21	153	344	589	1,108
Total Royalties	0	476	1,177	2,136	3,098	6,886
North America Consulting/Training	0	0	0	0	0	0
Total Division Revenues	**506**	**4,894**	**8,026**	**12,352**	**18,064**	**43,842**
OPERATING PROFIT SUMMARY						
Annual Operating Profit	(356)	107	1,506	3,574	6,986	
Cumulative Operating Profit	(356)	(250)	1,256	4,831	11,817	
Annual Operating Profit Before P/S Amort	(6)	1,507	2,906	4,974	8,386	
Cumulative Operating Profit Before P/S Amort	(6)	1,500	4,406	9,381	17,767	
Operating Profit Margin	-70%	2%	19%	29%	39%	
KEY INDICATORS						
NSS/Quota Sales Rep	250	593	602	727	904	
NSS/Employee	42	173	167	182	214	
Revenue/Employee	42	204	223	257	306	
Expense/Employee (exc. Amort)	43	141	142	154	164	
Expense/Employee	72	199	181	183	188	
Operating Profit/Employee	(30)	4	42	74	118	
Total Headcount	13	25	37	49	61	

P&L Summary RemoteWorx (assumes $14m purchase price with 30% write-off)

Integration Strategy

Products

CoreData has been shipping product since 1997 - RemoteWorx is at version 3 today - and has a viable standalone product that will be retained in this form for individual sale. Integration with both SAMS:Vantage Network Edition and SAMS:Alexandria will be undertaken to produce a product suite that can be sold strategically into corporate accounts. In the case of SAMS:Alexandria, no development

will need to be done on the SAMS:Alexandria side removing risk of impact to the delivery of the next version of this product. SAMS:Vantage Network Edition will be adapted to take information feeds from RemoteWorx in order to produce in depth asset information which can be obtained as a by product of the operation of RemoteWorx. Asset information is a key part of Storage Resource Management that will be strengthened in VNE by being able to product comprehensive reports on the equipment that is not directly server attached.

Organization

CoreData is a startup company with a small number of staff, 11 people in all. It is intended to move the operation to the SMD office in Boulder Colorado, with an alternative of creating a small development facility in Phoenix should there be significant resistance to relocation by key individuals. At this time, the relocation objective has not been presented to the CoreData staff.

Headcount Changes and commentary:

Department	Current	Change	Change %	Result
Executive*	5	-5	-100%	0
PD&E/CS	5	+2	0%	7
SE	0	+1		1
Sales	0	+2		2
Non Quota Sales	0	+2		2
G&A	1	0	1	1
Total	**11**	**+2**	**-18%**	**13**

*The executive management at CoreData has multiple roles. The VP of Engineering is the key developer, sales and marketing are covered collectively by the CEO, VP Sales, VP Marketing, VP Business Development and a Sales Director. There is no direct sales force apart from these individuals.

Operational Plan and Timings

Phase	Description	Days Spend	Schedule
1	Operational Review Phoenix	2	Acceptance + 1 wk
2	Post Operational Review + Planning	7	Acceptance + 2 wk
3	Review and Approval	2	Acceptance + 2 wk
4	Preparation for Implementation	3	Acceptance + 3 wk
5	Simultaneous Implementation in all sites	1	Acceptance + 3 wk

Restructure

SMD projects the following major restructure items:

• Deal costs:	$250k
• Executive/employee severance:	$250k
• Facilities:	$50k
• Computer Equipment:	$200k
• Travel:	$50k
• Other:	$50k
Total	**$850k**

Relocation of the development facility to a new location within 3 months is anticipated.

Other costs include travel, product collateral changes and internet/intranet redesign.

Valuation Discussion

Broadview was consulted to obtain guidelines for valuation of CoreData. A study was made of representative storage management companies and recent transactions. A summary of the findings as presented by Broadview follows:

($ Thousands)

Methodology	Median Multiple	CoreData	CoreData Implied Value pre Discount	Private Company Discount Factor	Balance Sheet Adjustment	Implied Value
Public Company Comparables						
Multiple of Trailing 12 months revenue	3.66x	$1,345	$4,916	40%	$299	$3,248
Multiple of Forward 12/31/99 revenue	2.97x	$3,419	$10,162	40%	$299	$6,396
Multiple of Trailing 12 months earnings	89.6x	$50	$4,518	40%		$2,711
Multiple of forward 12/31/99 earnings	53.5x	$128	$6,874	40%		$4,124
Transaction Comparables						
Miltiple of revenue for Comparable and Private Companies	3.78x	$1,345	$5,077		299	$5,375

Based on the above, Broadview independently had a valuation discussion with CoreData, during which it was mentioned that Sterling Software may put in an offer of between $5M and $6M. CoreData's reaction was reportedly 'luke-warm', indicating that the deemed value was on the low side, but not exceptionally so.

Sterling Software EPS model results follow:

	1.30 Per Share Premium = 0%, Cost = 0.0M				1.80 Per Share Premium = 38%, Cost = 9.5M				2.30 Per Share Premium = 77%, Cost = 12.1M				2.80 Per Share Premium = 115%, Cost = 14.7M			
	2000	2001	2002	2003	2000	2001	2002	2003	2000	2001	2002	2003	2000	2001	2002	2003
PURCHASE - BASE																
30% Write Off																
Revenue Impact	5.8	10.2	16.3	23.8	5.8	10.2	16.3	23.8	5.8	10.2	16.3	23.8	5.8	10.2	16.3	23.8
% growth	1042%	77%	60%	46%	1042%	77%	60%	46%	1042%	77%	60%	46%	1042%	77%	60%	46%
Operating Profit Impact	0.8	2.3	4.3	7.7	0.6	2.0	4.0	7.5	0.3	1.7	3.8	7.2	0.0	1.4	3.5	6.9
% op profit	15%	22%	26%	32%	10%	19%	25%	31%	5%	17%	23%	30%	0%	14%	21%	29%
Pretax Impact	0.5	1.9	4.1	7.7	0.1	1.5	3.7	7.3	(0.3)	1.1	3.3	6.9	(0.7)	0.6	2.9	6.4
% pretax	9%	19%	25%	32%	2%	15%	23%	31%	-5%	11%	20%	29%	-12%	6%	17%	27%
Earnings to Common Impact	0.3	1.3	2.7	5.1	0.1	1.0	2.4	4.8	(0.2)	0.7	2.1	4.5	(0.5)	0.4	1.9	4.2
Earnings Per Share Impact	0.00	0.01	0.03	0.05	0.00	0.01	0.02	0.05	-0.00	0.01	0.02	0.04	-0.00	0.00	0.02	0.04
29% Write Off																
Revenue Impact	5.8	10.2	16.3	23.8	5.8	10.2	16.3	23.8	5.8	10.2	16.3	23.8	5.8	10.2	16.3	23.8
% growth	1042%	77%	60%	46%	1042%	77%	60%	46%	1042%	77%	60%	46%	1042%	77%	60%	46%
Operating Profit Impact	0.8	2.2	4.2	7.6	0.4	1.8	3.9	7.3	0.1	1.5	3.6	7.0	(0.2)	1.2	3.3	6.7
% op profit	13%	21%	26%	32%	9%	18%	24%	31%	2%	15%	22%	29%	-3%	12%	20%	28%
Pretax Impact	0.4	1.9	4.1	7.7	(0.0)	1.4	3.6	7.2	(0.5)	1.0	3.1	6.7	(0.9)	0.5	2.7	6.3
% pretax	8%	18%	25%	32%	-2%	14%	22%	30%	-9%	9%	19%	28%	-16%	5%	16%	26%
Earnings to Common Impact	0.3	1.2	2.7	5.0	(0.0)	0.9	2.4	4.7	(0.3)	0.6	2.1	4.4	(0.6)	0.3	1.8	4.1
Earnings Per Share Impact	0.00	0.01	0.03	0.05	-0.00	0.01	0.02	0.05	-0.00	0.01	0.02	0.04	-0.01	0.00	0.02	0.04
14% Write Off																
Revenue Impact	5.8	10.2	16.3	23.8	5.8	10.2	16.3	23.8	5.8	10.2	16.3	23.8	5.8	10.2	16.3	23.8
% growth	1042%	77%	60%	46%	1042%	77%	60%	46%	1042%	77%	60%	46%	1042%	77%	60%	46%
Operating Profit Impact	0.7	2.1	4.1	7.5	0.3	1.7	3.8	7.2	(0.0)	1.4	3.4	6.9	(0.4)	1.0	3.1	6.5
% op profit	12%	20%	25%	32%	5%	17%	23%	30%	-1%	13%	21%	29%	-7%	10%	19%	27%
Pretax Impact	0.3	1.9	4.0	7.6	(0.1)	1.3	3.5	7.1	(0.6)	0.8	3.0	6.6	(1.1)	0.3	2.5	6.1
% pretax	6%	19%	24%	32%	-2%	13%	21%	30%	-11%	8%	18%	28%	-19%	3%	15%	25%
Earnings to Common Impact	0.2	1.2	2.6	5.0	(0.1)	0.9	2.3	4.7	(0.4)	0.5	2.0	4.4	(0.7)	0.2	1.7	4.0
Earnings Per Share Impact	0.00	0.01	0.03	0.05	-0.00	0.01	0.02	0.04	-0.00	0.01	0.02	0.04	-0.01	0.00	0.02	0.04

Risks and Plans

- **Sterling Commerce OEM.** Around 50% of the current revenue stream is derived through OEM to Sterling Commerce. The loss of this arrangement would have a significant impact on the initial

revenue estimates for RemoteWorx within Sterling Software. **Plan** is to meet early with Sterling Commerce to establish if there are any areas of concern that would lead to the termination of this OEM and take corrective action immediately.

- **SMD VP of Labs** is not in place today. This will impact on SMD's ability to execute this and other acquisitions. **Plan** is to aggressively seek a VP of Labs through direct recruitment efforts.

- **Sales force ramp up.** CoreData does not have any experienced direct sales staff. **Plan** is to retain key individuals that will be able to train the SMD sales force, either on a permanent basis, or on transition.

- **Backup/Restore vs. Desktop Management** There are requirements for the management of PCs in general, both local desktops and remote/mobile users that extend beyond backup and restore. As this segment evolves it is seen that more than backup/restore will have to be offered. There are also standards evolving like DMI and WBEM that need to be considered and adhered to. **Plan** SMD will have to establish itself as a premiere supplier of backup/restore and grow into the management segment speedily to mitigate this risk. Support and compliance with the emerging standards will be developed.

- **Loss of Key Staff** Always a factor in an acquisition, key staff at CoreData need to be retained, in particular Karl Forster, the lead architect of RemoteWorx. **Plan** is to be flexible (but firm) in terms of development facility location, as well as to offer competitive compensation plans. Currently the CoreData staff is paid well below Sterling Software standards. SMD would also request consideration for special dispensation on allocation of stock options for key individuals. To guarantee availability of product knowledge, a 180-day holdout of developer availability will be included in the terms and conditions of an offer.

2) Company Description & Organization

Business Overview

CoreData is a privately held Phoenix, Arizona based company incorporated in 1995. Total revenues for FY98 (ended in December) were $1,344k. Of this, $50% is derived from an OEM of RemoteWorx to Sterling Commerce (Xcellenet), and 50% through resellers and maintenance.

CoreData does not have a large international presence; nearly all of the revenue is US sourced. Only one international reseller has been appointed, operating in Europe. The reseller, Genesis, has not produced any significant revenue to date.

CoreData, Inc. Historical Revenue

	1998	1997
RemoteWorx	520,954	52,576
MagVault	0	15,286
Installation Svcs	45,284	0
Maintenance	88,294	0
OEM	689,980	270,000
Total	**$1,344,513**	**$337,858**

CoreData Company History

The founders of CoreData come from the nuclear power generating industry. The idea behind the products grew out of efforts to meet Nuclear Regulatory requirements for configuration management of all critical data and related software and hardware used within nuclear power generating facilities. A prototype product called MagVault was delivered, which was primarily designed to backup desktop PCs to a secondary server, which could be duplicated to an offsite server. The movement of data from the secondary server to the offsite server was accomplished using advanced differencing technology, the same technology that is now the basis of the data movement function in RemoteWorx.

The major investors in CoreData:

Steve Gubin - President of Wilson Electric (Board Member) - 16% ownership

Jim Pitre - President of Crescent Run (Board Member) - 7.6% ownership

Kent Mueller - Former CEO of Mastersoft (Board Member) - 7.6% ownership

MicroAge, Inc (Board Member - Alan Hald, President MicroAge, Inc) - MicroAge has a right of refusal clause in the event of an acquisition offer - 20% ownership

Riley Family Trust - 4.3%

Headcount

CoreData has 11 employees based in Phoenix. There are 5 management executives, 5 development and support staff and an admin person. Sterling Software would retain all of the development and support staff as well as the key OEM people, of which there are 2. Subject to a final decision being reached on the location of the RemoteWorx development facility, the admin headcount may be retained.

Executives

Jim Parker - Co-Founder/President

Gary Legner - Co-Founder/Vice President Sales and Marketing

Karl Forster - Vice President Software Development

Rob Wilson - Vice President Business Development

Braxton Jones - Sales Director

Board of Directors

Jim Parker - President of CoreData

Gary Legner - Vice President Sales & Marketing, CoreData

Steve Gubin - President of Wilson Electric

Jim Pitre - President of Crescent

Kent Mueller - Former CEO of Mastersoft

Alan Hald - President of and represents MicroAge, Inc.

Ownership

CoreData Ownership Table							
Owner	Amount Held				Warrants	Options	Total
	Preferred A	Preferred B	Preferred C	Common			
Gubin, Steve	0	875,000	50,000	0	0	0	925,000
Legner, Gary	0	0	0	750,000	0	0	750,000
Parker, Jim	0	0	0	750,000	0	0	750,000
Riley, Family Trust	0	50,000	0	250,000	0	*100,000	400,000
Pitre, Jim	0	486,000	0	0	0	0	486,000
Mueller, Kent	0	389,000	50,000	0	0	0	439,000
MicroAge	1,000,000	0	0	0	0	**178,000	1,178,000
Hald, Alan	0	0	0	50,000	0	0	50,000
Wertheim, Jack	0	0	0	125,000	0	0	125,000
Jack Riley	0	0	20,000	0	0	0	20,000
Stock Option Plan	0	0	0	149,583	0	500,417	650,000
Totals	1,000,000	1,800,000	120,000	2,074,583	0	778,417	5,773,000

* Stock Option with Promissory Note Issued for $15,000
** Anti Dilution by options clause per MicroAge Investment Agreement

Employee Stock Options			
Owner	Amount Held	Options remaining available upon vesting	Total Possible
Forster, Karl	130,208	119,792	250,000
Jones, Braxton	0	40,000	40,000
Kark, Ken	14,583	0	14,583
Open (unoffered)	0	0	244,417
Schlarman, Tom	10,000	10,000	20,000
Sparks, Jim	0	15,000	15,000
Steiner, Mike	0	10,000	10,000
Trabilcy, Alan	0	2,500	2,500
Willis, Robert	0	2,000	2,000
Mueller, Victoria	0	1,500	1,500
Wilson, Rob	0	50,000	50,000
Total	149,583	256,000	650,000

Offices

CoreData is headquartered and has its only office in Phoenix, Arizona.

One international reseller, Genesis, represents CoreData in Europe. Terms for termination of reseller agreements are 90 days notice.

Sales and Marketing Strategy

The Company markets and sells its products through OEMs and VARs and has no direct sales force, although a number of the executives are involved in sales calls to larger corporations. The largest OEM is Sterling Commerce, who uses RemoteWorx in the Xcellenet product. In June 1999, a new OEM was announced with Imation, who plan to offer a web based backup service based on RemoteWorx.

3) Financial Information

The following table depicts the Base, Best and Worst case EPS assumptions.

	1.30 Per Share Premium = 8%, Cost = 6.8M				1.80 Per Share Premium = 38%, Cost = 9.9M				2.30 Per Share Premium = 77%, Cost = 12.1M				2.80 Per Share Premium = 115%, Cost = 14.7M			
	2000	2001	2002	2003	2000	2001	2002	2003	2000	2001	2002	2003	2000	2001	2002	2003
PURCHASE																
BASE																
Revenue Impact	5.8	10.2	16.3	23.8	5.8	10.2	16.3	23.8	5.8	10.2	16.3	23.8	5.8	10.2	16.3	23.8
% growth	1042%	77%	60%	46%	1042%	77%	60%	46%	1042%	77%	60%	46%	1042%	77%	60%	46%
Operating Profit Impact	0.9	2.3	4.2	7.7	0.6	2.0	4.0	7.5	0.3	1.7	3.9	7.2	0.0	1.4	3.8	6.9
% op profit	15%	22%	26%	32%	10%	19%	25%	31%	6%	17%	23%	30%	0%	14%	21%	29%
Pretax Impact	0.8	1.9	4.1	7.7	0.1	1.5	3.7	7.3	(0.3)	1.1	3.3	6.9	(0.7)	0.8	2.9	6.4
% pretax	9%	18%	25%	32%	2%	15%	23%	31%	-5%	11%	20%	29%	-12%	6%	17%	27%
Earnings to Common Impact	0.3	1.3	2.7	5.1	0.1	1.0	2.4	4.8	(0.2)	0.7	2.1	4.5	(0.5)	0.4	1.9	4.2
Earnings Per Share Impact	0.00	0.01	0.03	0.05	0.00	0.01	0.02	0.05	-0.00	0.01	0.02	0.04	-0.00	0.00	0.02	0.04
BEST																
Revenue Impact	6.6	11.5	18.2	26.5	6.6	11.5	18.2	26.5	6.6	11.5	18.2	26.5	6.6	11.5	18.2	26.5
% growth	1190%	75%	58%	46%	1190%	75%	58%	46%	1190%	75%	58%	46%	1190%	75%	58%	46%
Operating Profit Impact	1.5	3.4	6.0	10.1	1.2	3.1	5.7	9.9	1.0	2.8	5.4	9.6	0.7	2.5	5.1	9.3
% op profit	23%	29%	33%	38%	19%	27%	31%	37%	15%	25%	30%	36%	11%	22%	28%	35%
Pretax Impact	1.2	3.1	5.8	10.2	0.8	2.7	5.4	9.8	0.4	2.2	5.0	9.4	(0.0)	1.8	4.5	8.9
% pretax	18%	27%	32%	39%	12%	23%	30%	37%	6%	19%	27%	35%	-0%	16%	25%	34%
Earnings to Common Impact	0.8	2.0	3.8	6.8	0.5	1.7	3.6	6.5	0.2	1.5	3.3	6.2	(0.0)	1.2	3.0	5.9
Earnings Per Share Impact	0.01	0.02	0.04	0.06	0.01	0.02	0.04	0.06	0.00	0.02	0.03	0.06	-0.00	0.01	0.03	0.06
WORST																
Revenue Impact	5.0	8.2	12.5	17.5	5.0	8.2	12.5	17.5	5.0	8.2	12.5	17.5	5.0	8.2	12.5	17.5
% growth	896%	63%	53%	40%	896%	63%	53%	40%	896%	63%	53%	40%	896%	63%	53%	40%
Operating Profit Impact	0.3	0.8	1.6	3.1	0.0	0.6	1.4	2.9	(0.2)	0.3	1.1	2.6	(0.5)	0.0	0.8	2.3
% op profit	6%	10%	13%	18%	-10%	0%	6%	13%	-10%	0%	6%	13%	-10%	0%	6%	13%
Pretax Impact	(0.0)	0.5	1.4	3.0	(0.4)	0.1	0.9	2.5	(0.8)	(0.4)	0.5	2.1	(1.2)	(0.4)	0.1	1.7
% pretax	-2%	6%	11%	17%	-9%	1%	7%	14%	-19%	-4%	4%	12%	-29%	-10%	1%	9%
Earnings to Common Impact	(0.0)	0.3	0.9	2.0	(0.3)	0.0	0.6	1.7	(0.5)	(0.2)	0.3	1.4	(0.8)	(0.3)	0.0	1.1
Earnings Per Share Impact	-0.00	0.00	0.01	0.02	-0.00	0.00	0.01	0.02	-0.01	-0.00	0.00	0.01	-0.01	-0.01	0.00	0.01

4) Products & Services

RemoteWorx - Backup and Recovery for mobile, remote and desktop systems. The product uses a combination of advanced differencing technology, compression, changed file detection and file selection masking to achieve high levels of data reduction and reduced connection time. The backup preparation is done in a disconnected mode and when a connection is sensed the changed data is automatically sent to the server. The client can be set up to run silent on an automated schedule, making it impossible for a user to 'forget' to backup his system. The server in turn quickly acknowledges receipt of the backup, allowing the user to disconnect while the backup is processed on the server. These approaches further reduce connect time requirements. RemoteWorx uniquely has the capability for a user to recover a lost file locally without connection to a server.

Sub-components of RemoteWorx:

Asset discovery - While processing the backup, RemoteWorx can optionally gather in depth hardware and software configuration information, which can be surfaced in reports that will show exactly what is deployed. Included in the information is the BIOS manufacturer and release - many PCs are running BIOS that is not Y2K compliant.

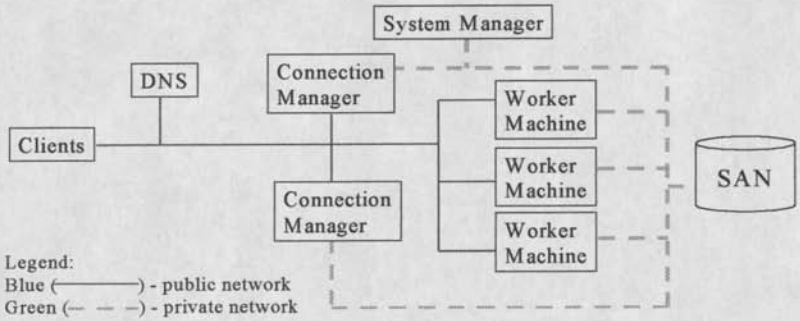
RemoteSync - automatically updates changed files from one location to another and is used internally within RemoteWorx to distribute software updates to clients as they connect. RemoteSync is also available as a Software Developers Kit that can be used as the basis of a software distribution package.

New Developments

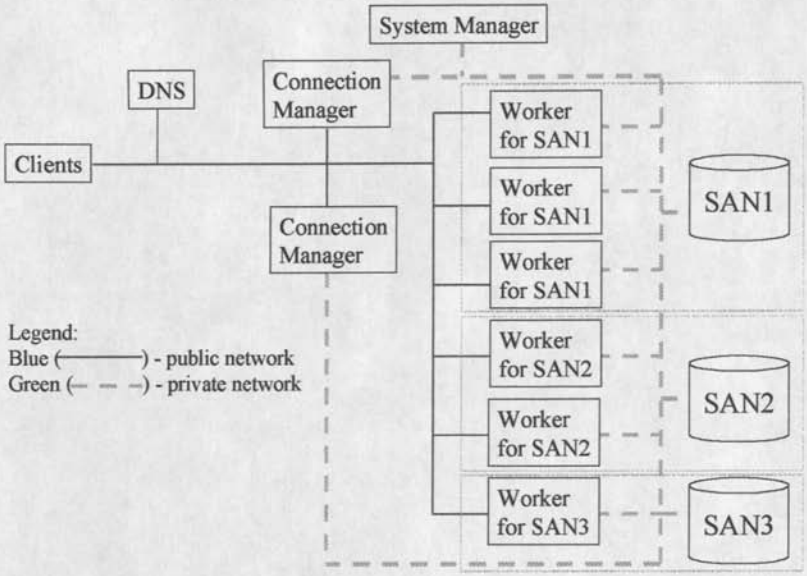
CoreData is busy developing a new architecture that will allow RemoteWorx to scale well in very large environments. Called the Scalable Enterprise Server (SES), this development is contractually committed to Imation and Price Waterhouse Coopers, to be delivered October 1, 1999.

There are a number of interesting aspects to SES that appeal to SMD. The design intent is to facilitate an easy entry point with flexible growth increments. Additionally, a concept of 'drop and disconnect' is inherent in the offering. This is an important aspect of low bandwidth management. Using intelligent load balancing, users backup deltas will be routed to any available server to be dropped. Receipt of the backup will be acknowledged and the user will disconnect, the post processing of the backup will be handled asynchronously by the server, or 'worker machine' as depicted in the diagram.

It is planned to utilize SAN technology at the server backend to further enhance the capability of any server being able to process incoming backups, yet maintain a single backup repository. This is very important when restores have to be serviced, once again; any available server will be able to process that request.



The following diagram indicates that the system can scale to support multiple SANs as well, as may be required in environments with different departments or classes of users:



SMD has had in depth discussions with Connected and Stac; neither has plans to offer a solution that scales to this extent. SMD finds this particularly worthy of consideration, given that the traditional customer base for SAMS products is the larger /Fortune 1000 organizations.

There are also plans to adapt RemoteWorx to be a server backup product aimed at remote branch locations, where bandwidth is frequently an issue. Detail design does not exist at this time.

5) Product Segment and Customers

Product Segment

Remote/mobile backup and recovery is an emerging product segment that is recognized by the industry analysts. Specifically the products meet the challenge of protecting data that is external to the organization and connections are made infrequently on low bandwidth lines. RemoteWorx itself is aimed at larger organizations that have significant numbers of staff working on a mobile basis or remotely from home offices.

Storage Management Trends

The Storage Management segment is changing rapidly. There are two major things happening:

a) Consolidation

This is happening in both the OS/390 and distributed markets. Most significantly in the OS/390 world, one of the stalwarts of the industry, Boole & Babbage has been bought by BMC. In the distributed arena, Veritas and Legato have emerged as major players and are enhancing their product sets through aggressive acquisitions for which they are paying top dollar. Other significant players like IBM and StorageTek are spending large amounts on development and marketing. It is apparent that the leaders will have **full solutions suites**, financial wherewithal, multiple channels to sell the products through, and close relationships with the hardware and infrastructure vendors.

b) Data outside of the data center

Analysts estimate that between 60 and 80% of data now resides outside the data center, with an ever-increasing amount of decentralized servers as well as remote and mobile users. New backup requirements exist as a result that facilitate effective and efficient data protection over low bandwidth connections.

c) The emergence of Storage Area Networks

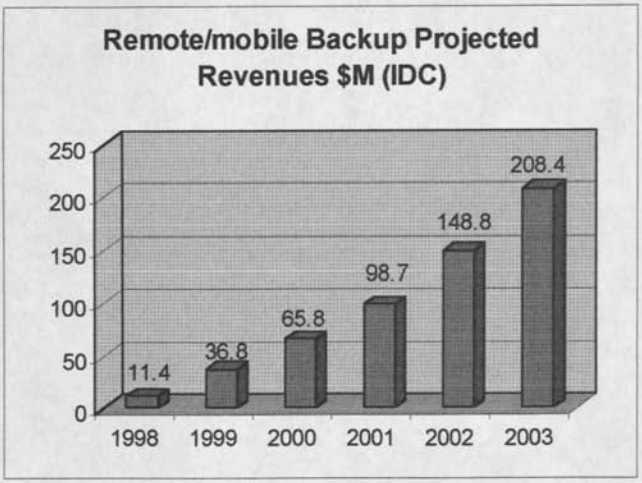
Storage Area Networks are being hailed as the next evolution in the storage marketplace. Deployment of SANs will change the way that traditional commodity functions such as backup and recovery are done. SANs allow access to all data from a single point, eliminating the need for complex, tiered architectures that gather data from multiple points and feed it back to large centralized consolidation points. Products in the backup space need to have architectures that allow for this new approach. Older architectures will be obsolete and can be expected to fade away rapidly.

Analyst Projections

Analyst research results indicate that 12 million laptops computers were shipped in 1996, predicted to increase to 24 million by 2000. In excess of 50% of all new corporate PCs are laptops today. Furthermore, IDC reports that as much as 80% of data now resides outside the corporate data center, creating a need for alternative backup methods, particularly where low bandwith connections exist.

Gartner Group predicts that by 2001, 35% of corporates with mobile workers will be investing in management solutions for remote and mobile users.

The following table shows IDC predictions for the remote/mobile backup segment through 2003:



Market Strategy

To date CoreData has been focusing on growing its business by expanding the OEM and VAR channels. Targeting the likes of IBM, the intent is to have RemoteWorx sold as part of a greater solution that the OEM vendor has.

Under Sterling Software control this model would be retained, a new dimension will be to sell through the SMD direct sales force, primarily positioning RemoteWorx as part of the end-to-end storage management solution, secondarily as a standalone product.

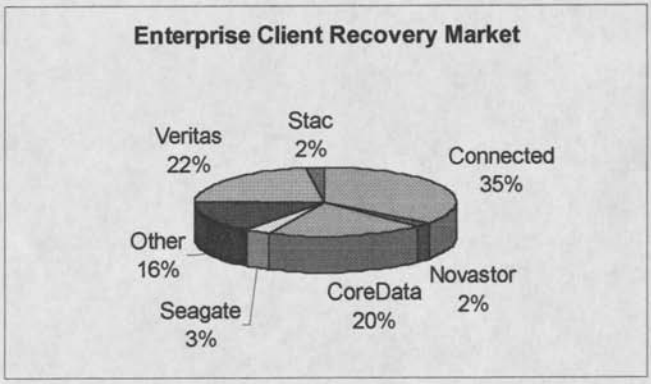
Customers

Copies of RemoteWorx sold through OEMs are not tracked; CoreData itself has sold RemoteWorx to a small number of companies, some of which follow:

MicroAge	Groupe Bull
Enron Energy	Valley Bank of Arizona
University of Phoenix	Price Waterhouse Coopers (pending sale)

CoreData also has OEM agreements with Sterling Commerce and Imation. Notable resellers are Ernst and Young Technologies, Inc and SSSI.

Competitive Landscape



IDC reports that in 1998 there were 6 vendors with more than $250k of revenue in the remote/mobile backup segment:

Company	1998 Revenues $M
Connected	4.5
Veritas	2.8
CoreData	2.5*
Seagate	0.4
Stac	0.3
Novastor	0.3
Other	2.0

*Per IDC report. CoreData actuals show $1.3M.

Competitor Discussion

The table above shows clearly that the main competitors to CoreData are Connected and Veritas. As Stac only started shipping product late in 1998, the revenues shown are misleading. Stac will emerge as a stronger force as it has signed an OEM with Legato and is working on others that will be equally significant. It should also be noted that Veritas acquired Seagate in 1998 - the Seagate revenues need to be added to those of Veritas. Also, IBM will be announcing a product soon. As far as significant distributed storage management companies are concerned, the only others are CommVault, who are in discussion with CoreData, and Hewlett Packard, who has not indicated what direction it will take. HP does OEM some of the Stac products and may well expand this arrangement to include the remote/mobile capability.

At this time, Sterling Software does not have an offering in the remote/mobile segment; the acquisition of CoreData will address this weakness.

Veritas

Entered the remote/mobile backup market boldly through the acquisition of TeleBackup, paying $76.3M for a company with $2.5M in revenues. The subsequent acquisition of Seagate included a remote/mobile product as well, giving Veritas 2 products in the segment. The TeleBackup based product would appear to be the stronger of the two, and SMD expects that it will form the basis of Veritas' activity going forward. The most important aspect is that Veritas have amassed a wide range of technologies, allowing it to set the standard for product suite offerings in storage management. This puts pressure on other vendors, including Sterling Software, to offer similar and preferably stronger solutions in order to remain competitive.

Connected Corporation

Started out offering remote/mobile as an Internet based service to end users, primarily targeting SOHO. It soon became apparent that this model was not viable, as it cost more to sell the service than the monthly subscription covered. Essentially, a direct sales presence was needed to close the deal and the cost of a direct sales force broke the financial model.

Connected commercialized the software that was being used to offer the service and took it to corporate America through a direct sales force. It has been successful doing this and is the market leader today, largely due to a small number of key deals. The Internet service is still offered but is not a significant revenue contributor.

Additionally, Connected is repositioning itself to be in the expanded systems management market rather than the storage management market, as it does not have additional suites components that allow head on competition with the likes of Veritas, Legato and IBM. Whether or not this approach will be successful has yet to be seen. None of the leading storage management vendors are taking this approach today.

Connected has one unique capability in that the product (Connected Network Backup) includes an integral Hierarchical Storage Management capability that is optimized for fast retrieval. Other offerings, including CoreData, rely on a traditional backup product being present to move off older revisions of files.

Sterling Software views Connected as a worthy competitor, and subject to the success of its positioning in systems as opposed to storage management, it is likely to remain so. Discussions were held with Connected about acquisition, at this time it is felt that CoreData represents better value but all options are being kept open.

Stac Software, Inc

Has its history in compression software for Windows, that became the subject of litigation against Microsoft and IBM resulting in Stac being paid royalties for a period of time (ended in 1998).

Stac positions itself in what it calls the '3rd ring' of backup - remote servers and remote/mobile users. Today, the most significant revenue generator is a product for remote Windows and Novell servers. The product, Replica Tape, is bundled with certain Hewlett Packard tape drives, and facilitates single button restore of remote servers from a tape drive that is co-located at the remote site. The end result is that non-skilled remote offices/branches can independently recover lost systems. SMD expects a significant announcement to be made by Stac and Tivoli, where Replica Tape will be used in the Tivoli Storage Manager suite.

For remote/mobile users, Stac introduced Replica NDM late 1998. Legato has signed an OEM agreement with Stac to use Replica NDM as the basis for its own remote/mobile offering.

Stac is a sizable company with 140 employees, including a 50 strong development facility in Estonia. Total revenues for 1998 were $19m, mostly derived from Replica Tape and an older product, Reachout.

Stac's business model is primarily to do OEM's and it has structured itself accordingly.

As the Replica Tape business is the largest revenue contributor, Stac is in fact more complimentary than competitive today, this will in all likelihood change as the remote/mobile product takes hold.

6) Business Plan & Integration Strategy

Operational Concept

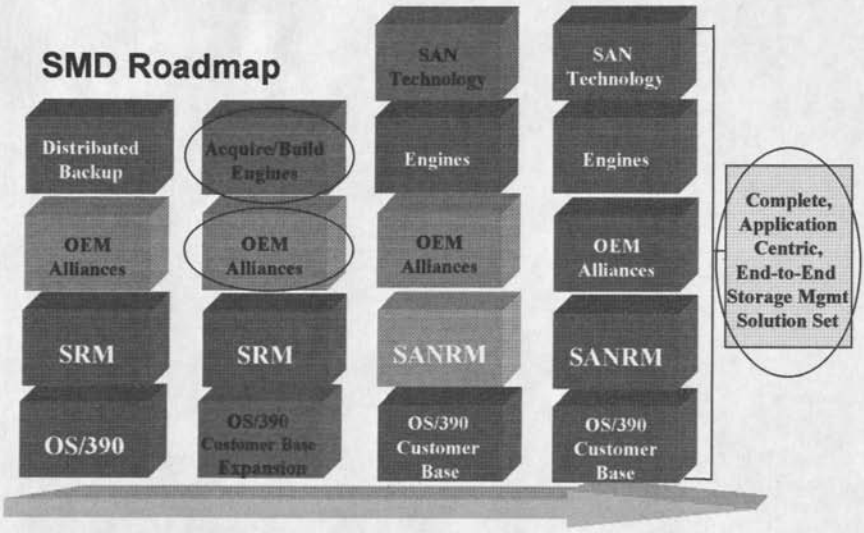
RemoteWorx fits well into the SMD strategy and facilitates forward motion in 4 areas:

1) An incremental step towards offering an end-to-end storage management suite. Primarily, it addresses an area of distributed storage management that is absent today, that of remote/mobile backup and recovery.

2) There are sub-components ('engines') within RemoteWorx that enable expansion into other, more generalized areas of PC/desktop management - both local and remote/mobile. Asset management and automated software distribution already exist for internal use within RemoteWorx; these capabilities will be grown into comprehensive product features via integration with other SMD products as well as through additional development. Automated 'healing' of the operating environment and applications is also achievable, as the core information required to enable this is already gathered and stored within RemoteWorx.

3) OEM and channel expansion. RemoteWorx has 2 significant OEM's today as well as a growing network of resellers. Access to these blends with and extends SMD's efforts in this area. Collectively, RemoteWorx, the inherent technology and integration with SMD's existing products represent a significant step towards offering an application centric solution.

4) Collectively, RemoteWorx, the inherent technology and integration with SMD's existing products represent a significant step towards offering an application centric solution.



Product Integration

A number of technical discussions have taken place with CoreData to assess the product integration opportunities and the benefits that would be derived from them. The 2 most significant and shortest term areas are:

1) Integration between RemoteWorx and SAMS:Alexandria to facilitate migration of older backup revisions to tape in such a way that retrieval time is optimized.

2) Integration between RemoteWorx and SAMS:Vantage Network Edition to take the asset data feeds from RemoteWorx and extend the monitoring and reporting capabilities of VNE to cover all of the systems in an enterprise within one centralized solution - servers, desktop and remote/mobile.

Primary Objectives

1) To add remote/mobile backup and restore capability to the SAMS product family, thereby covering a missing element.

2) To extend the base functionality of RemoteWorx to enter the desktop management arena.

3) To ultimately deliver a complete, fully integrated, end-to-end, multi-platform storage management solution.

Competitive Impact

The acquisition of RemoteWorx will provide a boost to SMD's competitive situation in the distributed storage management market. Recently SMD added SAMS:Alexandria to the product family, allowing entry into the mainstream of distributed storage management. SAMS:Alexandria does not have any functionality for supporting remote and mobile users, a capability that the leading competing vendors all have today. Adding RemoteWorx and its potential derivatives will place SMD on a firmer competitive footing. Not only will SMD have a more complete product stable, existing SAMS products will become stronger through new features enabled by the addition of RemoteWorx.

Operational Impact

The CoreData acquisition will have the following types of impacts on SMD's existing operations:

- It is intended to relocate the development staff to the Boulder facility. If significant resistance to this move is encountered a development-only facility will be created in Phoenix. There are merits to doing this, as there is a strong pool of skills in Phoenix with companies like Intel, Motorola, Adobe, Groupe Bull and others in the area.
- North American Sales, Marketing, CS and Finance & Administration will be operated out of Sacramento.
- The North America SMD distributed sales force and national account team will sell RemoteWorx directly. The existing CoreData resellers and OEMs will be retained and added to the SMD indirect channel.
- In order to extract and deliver the full potential of the RemoteWorx product and technology, additional development resources will be added.

7) Critical Success Factors

a) Smooth and rapid integration of RemoteWorx into the SMD operation.

b) Retention of key staff during transition from CoreData to Sterling Software.

c) Effective and quick ramp up of SMD sales force.

d) Sustaining of current OEM and VAR revenue streams during transition and on an ongoing basis.

e) Rapid integration of RemoteWorx with SAMS:Alexandria and SAMS:Vantage Network Edition.

8) Recommendation

SMD recommends that CoreData be acquired, as this action represents an immediate, significant, step forward in terms of the breadth and depth of the SAMS end-to-end storage management solution. RemoteWorx would also be SMD's first Internet based product.

Inherent in the RemoteWorx technology are capabilities allowing further developments that will move SMD towards its strategic goal of offering a comprehensive, application centric, product suite.

9) Appendix

The Restoration Process – Automated with Ease of Use

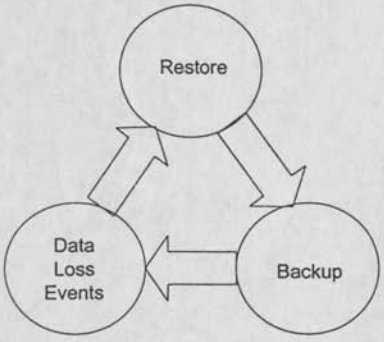
10/7/98

The explosive growth in the laptop market has created a red-hot demand for a highly automated and efficient process for data restoration. Corporate IT departments are now faced with a new set of challenges for this generation of remote, un-tethered and unmanaged remote and mobile users. With these challenges come higher support costs and more important, a higher risk of data loss.

The primary objective of the Restoration Process is to get the remote user back up and running, as soon as possible, following a data loss event. Although the magnitude of the loss event may vary, the key is to provide a Restoration Process where, regardless of the event, the user can be easily restored and quickly resume operations **with their data**.

There are three critical phases of an automated and efficient Restoration Process. They include backup, data loss events and restore activities. The backup process must be automated and invisible to the user, while being controlled by the IT department. The data loss scenarios and percentages of affected users must be understood in order to initiate efficient recovery activity. Finally, restoration must combine technology with good business decisions in order to provide the most efficient restoration possible. Effective data restoration should have minimal impact on the users, IT personnel and most important, provide immediate data recovery.

The Restoration Process



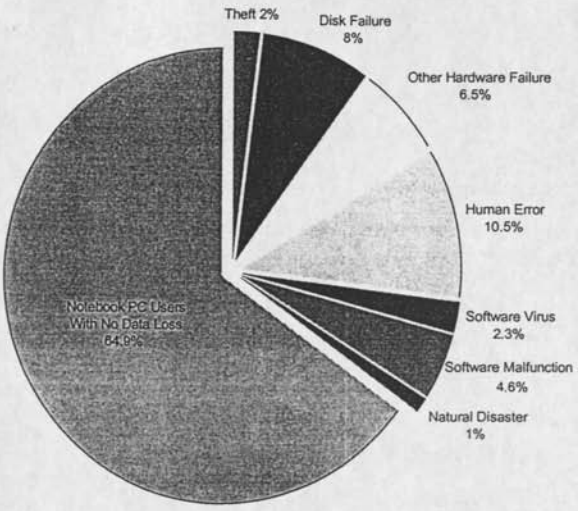
This paper describes CoreData's new and innovative approach for an automated, easy to use Restoration Process. The overall objective is to demonstrate the value of RemoteWorx technology throughout the entire Restoration Process. Specifically, this document will show that RemoteWorx is the most effective means for remote and mobile backup and data restoration from **any** cause of data loss.

The Portable PC Market – Annual Data Loss

The Portable PC market is exploding with laptops replacing desktop computers at an increasing rate. According to IDC, laptop PCs will grow by 30 million units by 2002. These systems account for 15% or more of all PCs owned by organizations and many of the companies surveyed recently by IDC plan to increase this number by more than 50% in the next 12 months. According to Gartner Group remote PC sites are expected to grow 40 percent annually to over 100 million workers by 2002.

IDC researchers indicate that the current laptop failure rates range from 11 to 18 percent. According to an article published in the February 1998 edition of SC Info Security Magazine, sources close to the U.S. laptop insurance industry suggest that 1 in 50 laptops (or 2%) are stolen, and this is considered to be the norm. Safeware Insurance Company reports that more than 1.5 million PCs were stolen, damaged or otherwise destroyed during 1997. Laptops also dominated accident trends.

Annual Data Loss Events - 1998



New Challenges

The playing field has changed for IT organizations. Their users are rapidly migrating from a secure and managed desktop PC to a remote and invisible connection. The ability to physically inspect, service and restore their remote and mobile PCs is an expensive, time-consuming responsibility. To illustrate the shift in IT resources, Gartner Group projects that IT total budgets will rise to 25% for mobile users by year 2000, up from 3% today.

Restoration Process challenges affect everyone – from IT personnel to remote and mobile users. These challenges come in every size and from every direction. They include, but are not limited to the following categories of challenges:

User Challenges

- Downtime for laptop replacement/restoration
- Backup processes that minimize user intervention and ensure data protection
- Connection and transmission time for remote backups
- Number of users connecting to the server - accessibility

IT Implementation Challenges

- Limited resources to support for various restoration events
- Ease of ability to restore user to a different laptop / OS
- Controlling the addition of new software and the need for software upgrades (at time of restoration)
- Data recovery capabilities for various loss events

IT Standards Control Challenges

- New standards and processes for data backup
- Asset discovery and tracking of changes on laptops
- Constant changes by laptop manufacturers making it difficult to standardize
- Control and distribution of multiple laptop models
- Upgrading laptops and software
- Detection of unlicensed software

The Scope of Restoration

Regardless of the severity of the data loss event, the IT organization's restoration process must be able to restore a user to (as close as possible) the point in time of the loss as quickly as possible. To achieve this, the IT department must be knowledgeable of a user's current state and provide easy to use restoration capabilities for the following items.

1. Hardware (laptop mfg./model)
2. Operating System
3. Applications
4. Mission Critical Data
5. User Profile (preferences/settings/benchmarks, etc.)
6. Non-critical information – user defined

CoreData's RemoteWorx software provides the IT department with asset discovery information that depicts the current state, and any changes, to the laptop – Items 1 through 6. This information is automatically discovered and transmitted to the server without user intervention. Providing up to date configuration information about the entire laptop community is essential for efficient support and restoration activities.

CoreData's approach is to establish backup standards for mission critical data, user profile information and any other non-critical information (with IT permission) Items 4, 5 and 6. This ensures that only the necessary information is protected, while detecting and monitoring all configuration changes to hardware, software and other data files. A complete description of these automated and invisible backup processes is in the Backup and Restoration Section.

Most restorations are performed on a new or different model of laptop or hard drive. Thus, CoreData's threefold approach regarding restoration of the operating system and standard applications includes:

- Utilizing the most recent hardware and up to date pre-loaded operating systems and applications from the manufacturer
- Ordering the most current (customized) configurations from the laptop manufacturer to minimize hot spare inventory and obsolete versions
- Utilizing existing tools built within software manufacturers products to effectively install and expedite the restoration process (OS and applications at the server)

This approach for OS and applications restoration, combined with restoration items 4 through 6 on the previous page provide the most efficient restoration equation for the remote and mobile community.

The Restoration Process – CoreData's Approach

There are three critical phases that comprise the Restoration Process. They include backup, data loss events and restore. The data loss events have already been presented (see Market Information Section). Each of these elements must have associated contingencies in order to achieve the most important objective:

Restore the users to any laptop, with the most current OS, applications, user profile settings and critical data, as quickly as possible

Backup and Restoration

Restoration will not exist without an efficient backup process. Restoration will not exist without an efficient backup process. (intentionally repeated). Also, it's no longer acceptable for users to be responsible for their own data. According to Gartner Group, backup processes should be "automated and invisible", or they won't happen. RemoteWorx provides these automated and invisible processes, and much more.

RemoteWorx is the only backup product that operates in a disconnected mode, minimizing connection time. In this mode, clients do not have to be connected to the server to initiate a backup. Backups can be scheduled to run automatically in the background.

Using CoreData's patent-pending technology, RemoteWorx detects byte-level changes to files by comparing the user's data with a compressed, local copy of the user's data from their last backup. The changed data packages are then securely stored and readied for transmission to the server the next time the user connects to the server. RemoteWorx connects to the server just long enough to "drop off" the previously prepared byte-level data packets. Then, the server independently processes the data packets without user connection. This ensures that the smallest amount of data is transmitted and further minimizes connection time.

RemoteWorx utilizes a company's existing infrastructure, reducing implementation and operations costs. When a user initiates a TCP/IP connection, the RemoteWorx client automatically senses the connection and verifies server presence. The data packets are invisibly transmitted utilizing the TCP/IP transport, without intervention from the user.

In addition to TCP/IP, folder and modem protocols, RemoteWorx supports e-mail. With this new feature, backup, retrieval and asset data can be transported using popular e-mail systems including Lotus Notes and Microsoft Outlook. IT departments can manage one system and eliminate the need for firewall modifications for users connected through the Internet. Lotus Notes and Microsoft Outlook users can have RemoteWorx data protection in locations where TCP/IP is not pervasive. With these flexible RemoteWorx connectivity options, network managers can implement a mix of protocols for remote and mobile backup within their existing infrastructure for rapid implementation and lower operations costs.

As illustrated in the diagram on page 2, half of all data loss is caused by human error, software virus or software malfunction. Data recovery from these types of lost data typically includes individual files or small groups of files—files that only RemoteWorx can recover instantly and without connection to the network. RemoteWorx features local, compressed storage of all backup data, including byte-level file revisions. Only with RemoteWorx can users immediately recover deleted or damaged files, including retrievals of past file revisions from their local disk—all while disconnected from the server.

Unlike its competitors, CoreData RemoteWorx provides Asset Discovery—automated discovery of remote and mobile PC hardware and software configuration information that is transmitted to the server at time of network connection. From the server, valuable reports are available for better managing PC assets and for help desk troubleshooting and service. RemoteWorx also provides optional distribution of RemoteWorx client software for fast, easy deployment. RemoteWorx features automatic byte-level distribution of software updates of its RemoteWorx client software as they are made available.

Non-Redundant File Backup/Restore – An Alternative Approach

Some competitors to CoreData offer an alternative restoration approach we will refer to as Non-Redundant File Backup (NRFB). NRFB creates a complete copy of the entire protected system with each backup on the server. This includes user data, personal settings and preferences, Windows Registry settings and software applications. Redundant files across several users are stored in a data repository on a backup server to save disk storage space.

NRFB can be used for hard disk failure scenarios (8%), but comes with a heavy price. The backup must occur while the users are connected, resulting in long connection times and high volumes of data being transmitted. CoreData's disconnected backup processes are designed to minimize connection time for byte-level data transmission, then drop off the data packages for independent server processing.
Connection times are also longer NRFB because these vendors backup data blocks that are typically

1024 bytes each or transmit compressed, whole files. CoreData's approach is to transmit just the bytes of data that changed since the last backup minimizing the amount of data to transmit and to further reduce connection time.

As indicated before, about 50% of all data that must be recovered is data lost due to human error or software virus or software malfunction. While CoreData's approach provides instant on-board recovery of these files without server connection, users with NRFB must connect to a server to retrieve whole, typically compressed data files. NRFB recovery approach for these commonly lost files can be a frequent, time-consuming, expensive process.

In summary, the NRFB approach can be used on in some data recovery situations—but the process of often slow and cumbersome. The CoreData approach is fast, efficient and capable of achieving **100% of data restoration** regardless of the data loss event or cause.

Market Requirements - Data Restoration

The following matrix compares backup and restoration features, functions and approaches of RemoteWorx and NRFB with Market Requirements. Only CoreData's RemoteWorx software can truly meet these Market Requirements.

Market Requirements	CoreData RemoteWorx	NRFB
Automatic and scheduled backup by local agents while disconnected with subsequent data transmission to the server upon connection.	Backups execute behind the scenes while disconnected. The data is automatically transmitted to the server upon connection – without user intervention	Not Available
Support client-side backup copies to support on-demand "local damage recovery" of files while disconnected from the server	On-board storage of all backup data, including file revisions Automatic retrieval of deleted or damaged files No server connection required	Not Available
Support byte-level or block level file backups to reduce the amount of transmitted data	"Byte-level change detection" technology for designated files to ensure smallest amount of data is transmitted Provides fast backup over intermittent, low bandwidth connections	Process includes: - CRC check on all files - Send CRC - Check database at server - Determine files to send - Transmits whole files or blocks while connected to server
Disconnected Processing: Client & Server	Automatic laptop backup without server connection "Drop and Go" processing of data packets at the server. No on-line processing of data	Not Available
Utilize existing Infrastructure (TCP/IP & MAPI Integration)	First to Market! Utilizes TCP/IP and/or MAPI compliant Email system for asset and backup data transmission and retrieval	Not available
Data Retrieval	Instant, disconnected on-board data retrieval (user) Simple data retrieval from Server (by user or system admin)	Not available
Market Requirements (continued)	**RemoteWorx**	**NRFB**

Asset Discovery	Auto discovery of laptop hardware, software and data Reports changes to assets System reports	Not available
User profile settings backup and restoration	Backup set created by system administrator or user Automatic updates of profile (byte-level changes) Point and click restoration of user profile settings	Accomplished within backup of apps and data. Restore is within a complete restoration of the applications and OS
Electronic software distribution and updates to remote users (RemoteSync SDK Module)	Automatic update (byte-level) and distribution to ensure most current version of RemoteWorx Version control at RWx server	Full size application updating or occurs at time of full restoration

Data Restoration: an added bonus for those who never experience a data loss

Note in the pie diagram that about 65% of all users will not experience a data loss within a year. However, these users should backup their critical data for two reasons: first, to safeguard them from potential loss in the future and second, to provide an easy transition from their current PC to a newer PC quickly, easily and with immediate productivity. Studies indicate that the typical user changes laptops every 18 months. Users that backup their data with RemoteWorx enjoy a fast, automatic and invisible backup experience and are always assured of data protection and recovery if they need it. Though they may not ever experience data loss or need to restore data, having their data backed up will be very convenient for them as they transition to a new laptop.

With RemoteWorx, the transition process to a new PC is fast and easy. Network administrators will typically receive a PC from the manufacturer with pre-loaded applications and operating system. To prepare the PC for a user, they simply connect the laptop to the network, locate the user's files on the RemoteWorx server and select, then point and click to copy these files, including the user's most recent data and user preferences to the new PC. The new PC is then ready for delivery to the user with data and user preferences intact.

Summary

The explosive growth in the laptop market has created a red-hot demand for highly automated and efficient data restoration processes. The goal of restoration is to get the remote user back up and running, as soon as possible, following a data loss event will minimal impact on the users, IT personnel. An automated and efficient restoration includes three phases: backup, data loss event and restore. Backup processes affect all users and must be automated and invisible, while being controlled by the IT department. Data loss affects about 35% of all laptop users. Causes and effects of data loss must be understood in order to initiate the most efficient restore activities. Effective data restoration should have minimal impact on the users, IT personnel and provide immediate data recovery.

According to Gartner Group, backup processes should be "automated and invisible", or they won't happen. RemoteWorx provides these automated and invisible processes. Gartner Group also published a comprehensive set of backup and restoration market requirements. Only CoreData's RemoteWorx software completely meets these Market Requirements.

RemoteWorx is the only backup product that operates in a disconnected mode, minimizing connection time. Using CoreData's patent-pending technology, RemoteWorx detects byte-level changes to files The changed data is sent to the server and "dropped off" the next time the user connects to the server for server processing without user connection. The smallest amount of data is transmitted is further reduced. And, RemoteWorx utilizes a company's existing infrastructure, reducing implementation and operations costs using TCP/IP, e-mail or modem connectivity.

Half of all data loss is caused by human error, software virus or software malfunction. Only with RemoteWorx can users immediately recover deleted or damaged files, including retrievals of past file revisions from their local disk—all while disconnected from the server.

Unlike its competitors, CoreData RemoteWorx provides Asset Discovery—automated discovery and reporting of remote and mobile PC hardware and software configuration information for better managing PC assets and for help desk troubleshooting and service. RemoteWorx also provides optional distribution of RemoteWorx client software for fast, easy deployment and automatic byte-level distribution of software updates of its RemoteWorx client software as they are made available.

About 65% of all laptop users will not experience a data loss within a year. However, these users will need to transition from their current PC to a newer PC quickly and easily and will expect immediate productivity. RemoteWorx provides a fast, automatic and invisible backup experience and convenient transition to a new laptop.

RemoteWorx is **unmatched** for its delivery of backup and restoration features and capabilities. RemoteWorx achieves the primary objective for IT organizations - to get the remote user backup and running, as soon as possible, following a data loss event.

CoreData continues to expand the RemoteWorx envelope. Upcoming releases will increase efficiencies with improved ease of use and new applications for growing markets. The integration of RemoteWorx capabilities with other technologies can deliver new enterprise solutions with rapid time to market and business growth opportunities.

RemoteWorx Design Differentiators

for the Remote & Mobile Marketplace
10/7/98

This document highlights the architectural design and key features of RemoteWorx and its advantages over competitive, block-level only backup products. Ten major design differentiators and their value will be presented in this paper.

RemoteWorx features unique, patent-pending, byte-level backup processing that is automatic and invisible and can be readily integrated with existing enterprise storage systems. It meets or exceeds all of the published Gartner Group requirements for managing and controlling remote and mobile user data. Where applicable, Gartner Group requirements are highlighted in this document, along with specifics on how RemoteWorx meets these requirements.

RemoteWorx software is written in "C", with a modular architecture that supports API calls to functional components. Its design also supports portability and integration with third party applications. RemoteWorx was developed for the mobile and remote user where intermittent, low bandwidth connections and ease-of-use issues must be addressed.

Overview: RemoteWorx Design Differentiators

1. Byte-level change processes to transmit and receive smaller data packages, that result in reduced connection time
2. Disconnected backup processes to reduce connection time
3. Flexible connectivity options including e-mail, TCP/IP and modem to readily work with existing network infrastructure, save costs and speed implementation
4. Automatic and invisible user operation to ensure backups happen without user involvement but with complete IT management control
5. Fast, easy, complete data restoration with minimal user or management impact
6. Scalability to handle thousands of backup clients on a single server
7. Automated RemoteWorx client software distribution, installation and software updates
8. Integration to enterprise-wide storage management systems
9. Asset discovery and reporting of remote and mobile PC hardware and software configuration information
10. Option to configure RemoteWorx clients to preserve disk space on PCs with smaller hard drive storage capacity

1. Byte-level Change Processes vs. Block-level Change Processes

Using CoreData's patent-pending technology, RemoteWorx detects byte-level changes to files by comparing the user's data with a compressed, local copy of the user's data from their last backup. The changed data packages are then securely stored and readied for transmission the next time the user connects to the server. The result is we transmit the smallest amount of backup data while the client is connected to the server.

Block detection techniques divide a file into fixed length blocks, usually 1KB blocks, and use a CRC or check sum to determine if a block has changed. It does not know which bytes within the blocks have changed therefore, all blocks for which the CRC has changed will be backed up and transmitted. In cases where files have bytes inserted at or near the front of the file most of the blocks will appear to have changed therefore most, if not all, of the blocks will have to be transmitted. (Please refer to the Change Detection diagram on the next page).

Byte-level retrievals of past versions of a file require only transmitting the byte level differences to the user. Block-level technologies require full file retrieval from the server to the user.

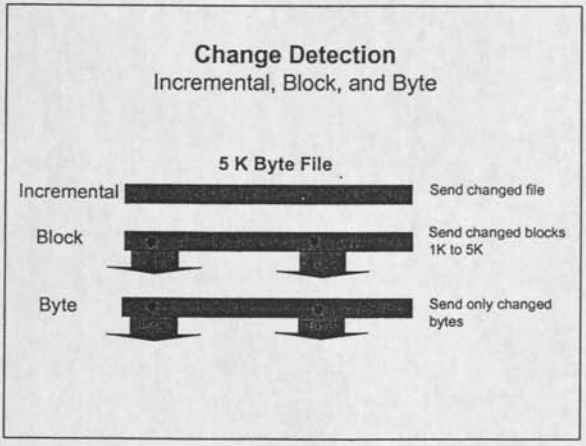
The RemoteWorx Clients on-board database of current file copies is compressed, requiring only 50 MB to 60 MB for most users. Block differencing, requires a smaller database stored on the laptop and only requires the CRC of each block, of each file, to be backed up. However, having a compressed version of the backed up versions on-board offers a number of important benefits as highlighted below.

Gartner Group Requirement: Client side back-up copies are needed to support on-demand "local damage recovery" of individual files, without server involvement.

RemoteWorx Response: RemoteWorx keeps a compressed version of the most recent copy of each critical file, allowing for a virtual "undelete key" by the user – an on-demand recovery.

RemoteWorx Benefits:

- Accidentally deleted or damaged files can be instantly retrieved from the user's local disk.
- Studies have indicated that over 50% of all laptop data loss are from accidentally deleted or damaged files.
- Fast retrieval of point-in-time data from the server, since only the byte level changes need to be transmitted from the server.
- Hundreds of hours per year in saved data transmission and staff time, reduced data storage costs and an efficient means of business and disaster recovery.



2. Disconnected vs. Connected Backup Processes

RemoteWorx is the only backup product that operates in a disconnected mode. In this mode, clients do not have to be connected to the server to initiate a backup and they do not have to be connected to the server while it processes a backup transmission. A local agent performs a backup automatically based on a scheduled time or event, and the user doesn't have to be

connected to the server. When a connection is made to the server, data packets are "invisibly" sent and "dropped off". The server then processes data packets without requiring the user to remain connected. The server processes packets and prepares a response to the client agent confirming that the data was processed successfully. The response can be delivered to the user the next time they connect to the corporate network. This design works like a database using a two-phase commit process: 1) the "transaction" is not released (committed) until, 2) the server process response is received.

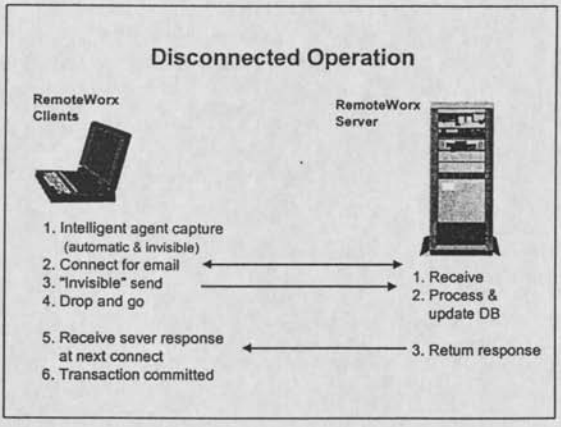
Intelligent agents on RemoteWorx prepare backups automatically and off-line for user convenience and to minimize network connection time. (Refer to the diagram on Disconnected Operations).

Gartner Group Requirement: Laptop PCs require opportunistic backup.... - i.e., automatic backup performed by local agents without server involvement.

RemoteWorx Response: RemoteWorx uses on-board intelligent agents that act based on a schedule or an event and perform in the background without requiring any user action.

RemoteWorx Benefits:

- Backups occur automatically without server connection
- Server backup processes occur while disconnected.
- RemoteWorx can utilize the customer's existing e-mail infrastructure. This design enables a backup to be sent as an email attachment and the client never has to be directly connected to the RemoteWorx server. (Refer to RemoteWorx Utilizing Existing Infrastructure Diagram)



3. Flexible Connectivity

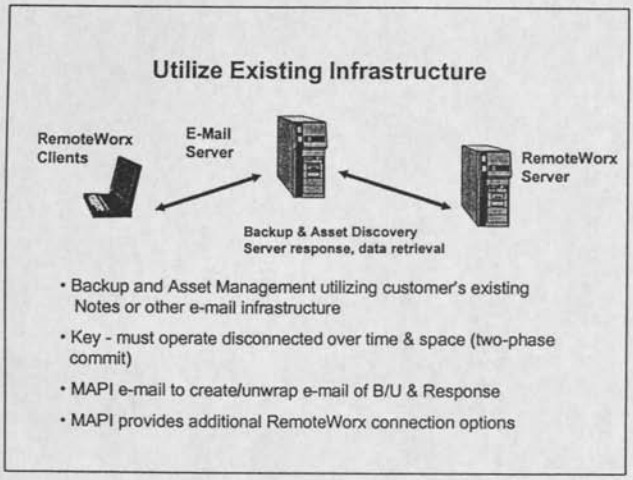
RemoteWorx provides flexible connectivity options that enable enterprises to experience savings in implementation time while adhering to established standards. The product supports TCP/IP, modem, and MAPI (messaging API) for MAPI compliant mail systems such as Lotus Notes and Microsoft Exchange. The e-mail capability also enables use in worldwide locations where TCP/IP is not pervasive. Network managers can implement a mix of connection options for remote and mobile backup within their existing infrastructure and manage only one system.

Managers can also eliminate the need for firewall modifications if the existing email infrastructure is used. (Refer to the RemoteWorx Utilizing Existing Infrastructure diagram)

The RemoteWorx agent connects to the server just long enough to drop-off the data packet, minimizing connection time at the server. These backup and sever processing features are unique to the industry and provide the most efficient means for automated and invisible backup.

RemoteWorx Benefits:

- Flexible connection options enable customers to select the optimal connectivity solution.
- Customers can use their existing email infrastructure (MAPI compliant).



4. Automatic and Invisible Operation

The process of backing up and transmitting user data to the RemoteWorx Server can be set up to be "automatic and invisible" without any user involvement required. Corporate IT can use the power of RemoteWorx to set and enforce storage management standards. They can configure backup schedules, and capture sets, and export them automatically to groups of users for automatic installation on their laptops.

Once the user's configuration is set up, the backup occurs automatically, and waits for a connection opportunity to send. As a user connects to a TCP/IP email connection, RemoteWorx automatically determines that a connection has been established and will invisibly send the previously captured back-up package.

As changes to a user's configuration or RemoteWorx software are required, those changes are automatically updated to each user as he connects to the server.

Gartner Group Requirement: Backup processes performed by remote users should be automatic and invisible without server involvement or it will not happen. After backup, subsequent movement of backup data to the server occurs upon connection to the corporate environment.

CoreData Response: RemoteWorx uses on-board intelligent agents that act based on a schedule or an event and perform in the background without requiring any user action and without being connected to the server. With RemoteWorx, when the user makes a connection, say for email, the backup data and any changes in hardware or software configuration are transmitted as byte-level changes only.

Benefits:

- Corporate IT sets and enforces standards that they choose for remote and mobile users.
- A remote client software may be installed and updated without user involvement and without IT ever touching his machine.
- The user is not required to remember to perform a back-up or to send one – it happens "automatically and invisibly".

5. Fast, Easy, Complete Data Restoration

In the event of a disaster - a complete loss of all data on a user's machine, a user's OS, applications, data, User's Profile, (preferences, settings and favorites) must be restored quickly. Effective data restoration should have minimal impact on the users, IT personnel and most importantly, provide complete data recovery.

In that event, RemoteWorx restore options enable administrators to easily restore critical data files and User Profiles with easy point and click operation. This is a powerful feature for administrators that need to send out "hot swap" replacement PCs complete with images of a user's OS and applications plus the up-to-date critical data files and a User's Profile.

Benefits:

- All critical data files can be restored on a new machine or removable media with just a point and click.
- A User's Profile restores the individual preferences, settings and favorites of a user, thus returning him to full productivity as soon as possible.
- Hot swap machines containing current images of a user's OS and applications are combined with the data and profiles above for easy and quick restoration.

For more information on CoreData's data restoration capabilities, contact CoreData and request their new white paper, "The Restoration Process – Automated with Ease of Use."

6. Scalability

Scalability parameters include how many users can be simultaneously connected to a given server configuration, and how many user backups can a server process in a backup window.

The RemoteWorx disconnected design is inherently more scaleable than block level designs because users only connect for the time required for data transmission. Because users can "drop and go" more users can be connected within a specified period of time. Block technologies require connection during backup, transmission and processing.

The RemoteWorx server software operates as a multi-threaded engine with thread prioritization and pooling. It priorities packet receiving over processing and determines the optimum number of differencing engines per processor.

Over 250 RemoteWorx Client connections simultaneously processing backup packets have been tested on a single RemoteWorx Server. Servers could potentially be configured for 2,500 to 5,000 or more users with the appropriate number of processors, disk access channels.

Benefits:

- Ability to configure thousands of RemoteWorx clients with a single RemoteWorx server
- Centralized remote and mobile PC storage management and control
- Optimized server performance using NT multi-threaded processing and pooling

7. Automatic Client Software Distribution, Installation, and Software Updates

Using the RemoteWorx Auto Client Installer option, IS managers can standardize settings for groups of RemoteWorx clients and distribute self-installing software and settings via e-mail to clients. This provides rapid, easy, consistent deployment of RemoteWorx client software across the network. RemoteWorx Server includes a data synchronization engine that enables network managers to automatically and invisibly distribute byte-level RemoteWorx client software updates, as they become available from CoreData.

CoreData has also developed a RemoteSync SDK for developers and users to synchronize data or software changes on remote and mobile PC machines automatically – at the byte level.

Gartner Group Requirement: Other data and systems management functions (i.e., application data synchronization) must also be initiated when a "connect to the network" event occurs.

CoreData Response: CoreData's RemoteSync SDK provides significant savings in user time, IT and line time to synchronize key data and software.

Benefits:

- Information managers set and control storage management standards for remote and mobile users.
- Dramatic savings in time, software deployment, support and distribution costs
- Clients don't have to perform an install with diskettes or CD's

8. Integration to Enterprise Management Systems

RemoteWorx integrates with one of the most popular enterprise storage management software systems – IBM's ADSTAR™ Distributed Storage Manager (ADSM). An optional Space Manager feature provides the most efficient means to migrate critical data from remote, mobile and desktop PCs to ADSM. Using pre-defined business rules, RemoteWorx migrates critical data to ADSM. This provides storage management control, consistent disk space availability for RemoteWorx backup and enables users to retrieve files from ADSM.

In this way, the ADSM server is performing an Archive/HSM function for the RemoteWorx server. In the event that the migrated file becomes active, the RemoteWorx Server automatically retrieves that file from ADSM. The RemoteWorx Space Manager is designed to easily interface with other storage software products, should that become a requirement.

Benefits:

- Information managers can monitor and control the storage growth and required storage space for the RemoteWorx server
- Provides a consistent, enterprise-wide solution
- Information managers set client backup policies and guidelines that can be automatically enforced.

9. Asset Discovery (hardware, software & data)

Asset Discovery is an optional feature for RemoteWorx. It discovers any changes to a PC's hardware or software configuration and is captured at the same time a backup occurs. Initial discovery and tracking of changes to this information is an essential element in managing remote/mobile assets and workforce.

Benefits:

- Information managers can discover and track the exact configurations they're required to manage for planning, budgeting and strategy setting.
- Asset discovery occurs automatically and invisibly as data is backed up.
- The data can be reported to IT, help desk support and others so they can understand their users current configuration data to improve effectiveness

10. Small software footprint for RemoteWorx Clients with limited local disk space

Users with older laptops may have small hard drives with insufficient data storage to accommodate the on-board, compressed version of files required for byte-level processing. As stated earlier, the normal requirement for on-board storage is 50-60MB. CoreData can provide a RemoteWorx version that requires a smaller footprint on the user's PC but it will not offer byte-level change detection. When users upgrade to a more modern laptop with higher local storage capacity, they should also migrate to the more efficient version of RemoteWorx that utilizes byte-level change processes

Benefits:

- A viable solution for laptop PCs with smaller data storage capacity
- Provides storage protection and ability to recover data in the event of a data loss.

Summary

According to Gartner Group, backup processes should be "automated and invisible", or they won't happen. RemoteWorx provides these automated and invisible processes. Gartner Group also published a comprehensive set of backup and restoration market requirements. Only CoreData's RemoteWorx software completely meets these Market Requirements.

RemoteWorx is the only backup product that operates in a disconnected mode, minimizing connection time. Using CoreData's patent-pending technology, RemoteWorx detects byte-level changes to files The changed data is sent to the server and "dropped off" the next time the user connects to the server for server processing without user connection. The smallest amount of data possible is transmitted. And, RemoteWorx utilizes a company's existing infrastructure, reducing implementation and operations costs using TCP/IP, e-mail or modem connectivity.

Half of all data loss is caused by human error, software virus or software malfunction. Only with RemoteWorx can users immediately recover deleted or damaged files, including retrievals of past file revisions from their local disk—all while disconnected from the server.

Unlike other products, CoreData's RemoteWorx provides Asset Discovery—automated discovery and reporting of remote and mobile PC hardware and software configuration information for better managing PC assets and for help desk troubleshooting and service. RemoteWorx also provides optional distribution of RemoteWorx client software for fast, easy deployment and automatic byte-level distribution of software updates of its RemoteWorx client software as they are made available.

About 65% of all laptop users will not experience a data loss within a year. However, these users will need to transition from their current PC to a newer PC quickly and easily and will expect immediate productivity. RemoteWorx provides a fast, automatic and invisible backup experience and convenient transition to a new laptop.

RemoteWorx is unmatched for its delivery of backup and restoration features and capabilities. RemoteWorx achieves the primary objective for IT organizations - to get the remote user backup and running, as soon as possible, following a data loss event.

CoreData continues to expand the RemoteWorx envelope. Upcoming releases will increase efficiencies with improved ease of use and new applications for growing markets. The integration of RemoteWorx capabilities with other technologies can deliver new enterprise solutions with rapid time to market and business growth opportunities. And, it's modular design supports OEM and others wishing to enable interface to or selective use of RemoteWorx functions.

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Date: August 4, 1999

To: Louis Grosskopf
Bryan Urquhart

Copy: Paul Baker
Sid Dunayer

From: Burton Grad

Subject: CoreData Valuation

work papers
w/ TA Samples

We need to discuss with you the process to be followed by BGAI in valuing the intangible assets acquired by SSI/SMD from CoreData:

- **Software Products** — RemoteWorx
- **In-Process R&D Technologies** — Scalable Enterprise Server with reduction for core technologies and percentage of work not yet completed
- **Retained Work Force** — Cost savings from not having to recruit, train and bring new employees to full productivity; adjusted for taxes
- **Customer Base** — Opportunity to sell other current SMD products to the CoreData customers; NPV of projected cash flow
- **Developed Technologies** — Value/replacement cost for previously delivered or other technologies for future products
- **Going Concern/Goodwill** — Remainder of acquisition cost not covered by tangible or other intangible assets

I am sending you certain work sheets which will need to be prepared to provide the information that Sid Dunayer and I need to carry out the valuation process. The following items are noted:

1.	Information needed to establish value of existing products	see Attachment 6
2.	Information needed to establish value for new products	see Attachment 6
3.	Information needed to determine core technologies contributions (for each new offering)	Attachment 2
4.	Information needed to determine percent completion (for each new offering)	Attachment 3
5.	Retained employee cost savings analysis form	Attachment 4
6.	CoreData Customer Base analysis form	Attachment 5a
7.	CoreData Customer Base potential for specific SMD products	Attachment 5b
8.	Information Request List	Attachment 6
9.	Financial picture of transaction for allocation purposes	Attachment 7

To help you, I have enclosed sample appendices from a report we did for an NMD acquisition:

Appendix G-1	Definitions
Appendix G-2	Core technologies, technical contributions, market weighting factor
Appendix G-3	Percentage Completion Analysis
Appendix I-1	Retained Work Force
Appendix I-2	Customer Base

Let's discuss each item to ensure that the objectives are understood and that the level of information required is specified.

Enclosures

Core Technologies Contributions

The key steps are:

1. Identify primary functions for each new SMD product. For each primary function, identify principal "technologies" required.

2. Identify corresponding functions from previous CoreData or SMD products (e.g., core technologies).

3. Map significance of functions in #2 to functions in #1.

4. Establish relative market value of each functional area, and then calculate weighted contributions of the core technologies.

5. The sum of the core technologies contributions will be deducted from the computed value of each new SMD product.

Percent Completion Analysis

The key steps are:

1. Establish an overall development plan covering start of each project through general release; identify principal elements in the development process.

2. For each element, determine development effort/cost incurred (if completed or in process) or expected.

3. Lay out corresponding time schedule.

4. Identify development costs to acquisition date.

5. Determine date when new product can be expected to pass FAS86 technical feasibility test.

6. Identify development costs from acquisition date to FAS86 clearance date.

7. Identify remaining development costs -- from FAS86 date to general release date.

8. Are there any special technological complexity factors that would make the work done to date more valuable than the work still to be done prior to FAS86 clearance?

Employee Cost Savings Analysis

For retained employees, we need to fill out a table like the one below:

Employee Categories	Number of Retained Employees	Average Monthly Salary	Time (months) to be Fully Productive	Recruiting Cost (% of Salary)	Frequency of Use of Recruiting
Executive/Senior Management					
Sales/Marketing					
Senior Technical					
Other Technical					
Customer Service					
Training					
Services					
Finance and Administration					
Total					

Average percentage increment for benefits _____

Customer Base Analysis

For CoreData customer base, fill out a table like the one below:

Customer Category	Number of Companies	1998/1999 Annual Core Data Revenue Contributions	% Overlap with SMD
Top 10%			
Next 20%			
Remaining 70%			
Total			

Customer Base Potential

For customer base potential, fill out a table like the one below:

SMD Products

Customer Base	1	2	3	4	5
Percentage of CoreData Customers who will Buy					
Price/Unit Sale (large, medium and small)					
Add-on/Upgrade (%)					
Retention Rate (%)					
Maintenance (%)					
First-year Maintenance (%)					
Services (% of NSS)					
Operating Margins (%)					

Information Required for Product and Technologies Valuation

1. List of principal CoreData customers for preceding three years and the revenues from each of these accounts for each year

2. Analysis of CoreData installed customer base including installation dates, maintenance status, platforms

3. Financial statements for CoreData and SSI/SMD for the preceding three years

4. Effective SSI/SMD U. S. tax rate (federal and state) and international tax rate for budget purposes as of the acquisition date

5. Discount rate for SSI/SMD as of the acquisition date

6. Organization chart for CoreData, with number of employees by function

7. Marketing materials for CoreData

8. List, description, size and market share of principal competitors to CoreData for software and services.

9. SSI/SMD acquisition analysis materials for CoreData

10. SSI/SMD business and strategic plans for acquired CoreData products and technologies including planned products, types of services, pricing, development projects, etc.

11. SSI/SMD sales, marketing and support plan for acquired CoreData products (both delivered and in process) and customers

12. Technical analysis of relevant CoreData and SSI/SMD products and in-process development activities in terms of applications, industries and system functionality

13. Technical plans for utilizing and incorporating acquired CoreData technologies in future SSI/SMD products and services

14. Information on costs of replacing employees: recruiting, training, productivity

Analysis of Acquisition Costs

Acquisition Costs ($000)	
Purchase Price	
Restructuring, Transition and Other Acquisition Costs (preliminary)	
Total Acquisition Costs	
Tangible Assets/Liabilities	
Assets/Liabilities	
Asset Writeoffs and Book Value Adjustments	
Net Tangibles	
Intangibles	
Value of Intangibles	
Value of Products	
Value of Technologies	
Value of Intangibles less Products and Technologies	
Other Intangibles	
Value of Other Intangibles	
Value of Retained Personnel	
Value of Customer Base	
Value of Other Technologies	
Remainder of Intangibles	
Goodwill/Going Concern Value	
Non-Allocated Acquisition Costs	

Function and Technology Mapping Definitions	
Market Value	
High	Critical to customer buying the product; would not buy without it
Medium	Valuable to customer buying the product, but lack of it would not, by itself, preclude the purchase, though in combination with other factors, could be a purchase stopper
Low	Limited significance to most prospects; nice to have, but would not pay extra for it
Function	
Full	Product feature is available in the specified release to the extent needed to satisfy market requirements for new product
Partial	Product feature is available but does not fully satisfy market requirements for new product
N/A	Product feature has essentially not been implemented
Reuse in New Product*	
None	Substantially no reuse of any existing technology
Requirements	Existing product provides a requirements definition of product features/functionality
Specifications	Existing product provides a functional specification for product usage
Design	Existing product's technical design is being used substantially in the future product
Code	Existing software source code is being used substantially in the future product

* If none or only requirements or specifications are reused in new product, then core technologies contribution is considered to be zero. If design or code is reused, then core technologies contribution is considered to be an appropriate percentage for that function.

Sentinel/IP

Functions	Market Significance	e-Control Technology Contribution	Market Weighting Factor	Core Technology Contributing Value
Data gathering/enforcement for TCPaccess	H	50%	.22	.110
Data gathering/enforcement for IBM TCP/IP	H	25%	.22	.055
High-speed data store (dataspace) and access routines	H	50%	.22	.110
User registration facilities to tie to other products	M	0%	.04	0
S:NIP definition of Sentinel resources	H	0%	.15	0
Netview definition of Sentinel resources	H	50%	.15	.075
Subtotal			**1.00**	**.350**
New Technologies Value				**.650**
Total				**1.000**

Turbo/API

Functions	Market Significance	e-Control Technology Contribution	Market Weighting Factor	Core Technology Contributing Value
Base TCP/IP Protocols (TCP, UDP, IP, ICMP, ARP, etc.)	H	100%	.10	.10
Device drivers (CETI, CLAW, LCS, Hyperchannel, etc.)	H	100%	.10	.10
Text applications and tools (packet trace, discard/echo/ chargen servers, ping, traceroute, etc.	M	100%	.05	.05
Name services (DNS server, resolver, etc.)	H	100%	.10	.10
Operator interfaces	M	100%	.05	.05
SNMP agent	H	60%	.10	.06
API facilities:				
Assembler TLI interface	M	100%	.04	.04
MVS UNIX System Services (Open Edition) interface	H	100%	.10	.10
IBM compatible IUCV interface	L	100%	.02	.02
IBM compatible HPNS interface	H	25%	.10	.025
IBM compatible C socket replacement library	H	0%	.10	0
Trace facilities for IBM compatible IUCV and HPNS interfaces	M	0%	.04	0
SNMP DPI interface	H	0%	.10	0
Subtotal			**1.00**	**.645**
New Technologies Value				**.355**
Total				**1.000**

Sentinel/IP - % Completion Analysis

People	P-months	Cost/Month	Cost	% Complete
Start to Acquisition Date (9/98 - 4/99)				
4 dev	18	$10,000	$180,000	
1 contract dev	6	15,000	90,000	
2 test	10	9,000	90,000	
2 doc	6	8,000	48,000	
Subtotal			$408,000	76%
Acquisition Date to FAS86 Date (5/99 - 8/99)				
2 dev	6	$10,000	$60,000	
1 contract dev	1	15,000	15,000	
2 test	4	9,000	36,000	
1 doc	2	8,000	16,000	
Subtotal			$127,000	24%
Total for Phases I and II			$535,000	100%
General Release Date (9/99 - 10/99)				
2 dev	4	$10,000	$40,000	
2 test	4	9,000	36,000	
1 doc	2	8,000	16,000	
Subtotal			92,000	
Grand Total			$627,000	

Turbo/API - % Completion Analysis

Start to Acquisition Date (9/98 - 4/99)				
People	**P-months**	**Cost/Month**	**Cost**	**% Complete**
5 dev	17	$10,000	$170,000	
2 test	8	9,000	72,000	
1 doc	2	8,000	15,000	
Subtotal			$258,000	87%
Acquisition Date to FAS86 Date (5/99 - 8/99				
1 dev	3	$10,000	$30,000	
1 test	1	9,000	9,000	
0 doc	0	8,000	--	
Subtotal			$39,000	13%
Total for Phases I and II			$297,000	100%
General Release Date (9/99 - 10/99)				
2 dev	3	$10,000	$30,000	
2 test	4	9,000	36,000	
1 doc	3	8,000	24,000	
Subtotal			90,000	
Grand Total			$387,000	

Assembled Work Force Valuation

Based on information provided by Interlink and SSI, BGAI has computed the cost savings from acquiring and retaining 63 Interlink employees who were on board as of the date of acquisition. The other 102 employees either voluntarily or involuntarily resigned as of April 30, 1999 or were retained temporarily for transition activities.

The table below summarizes the key factors for valuing the Assembled Work Force:

Employee Category	Number of Retained Employees	Average Monthly Salary	Learning Period (months)	Recruiting Cost (% of Annual Salary)	% Usage of Recruiting
Sales/Marketing	16	5794	4	20	50
Senior Technical	17	7383	4	20	75
Other Technical	25	6276	3	20	75
Services	1	6667	2	20	75
Finance and Administration	4	2220	1	20	25
Total	**63**				

The number of employees were those actually retained on the NMD payroll just after the acquisition date, grouped into logical categories.

The average monthly salaries exclude benefits, which will be calculated as an additional 30% of salary.

Learning time is based on NMD experience in training comparable new hires.

Recruiting cost (from third-party recruiters) is based on a percentage of salary; the calculations are adjusted to take into consideration that many employees are directly hired, not obtained through outside recruiting firms. The percentage of personnel recruited through third parties is shown in the fifth column.

Training cost takes into consideration the lost productivity from the employees who are needed to provide on-the-job training or formal classes for new employees. This is assumed to be 15% of an equivalent employee's time during the learning period.

Relocation expenses, in NMD experience, have been needed in 50% of the cases for sales and technical employees. Where required, the amount paid averages $15,000 per technical engineer and sales/marketing person.

To determine the cost savings, BGAI followed these steps (all results are shown in the table below):

1. For each employee category, the productivity loss in training a new employee is calculated as the average monthly salary (plus benefits) times the number of employees in that category times 50% of the learning period (assuming a linear increase in productivity from start date through the end of the learning period).

2. For each employee category, the recruiting cost is calculated by multiplying the number of employees by the average recruiting cost percentage times the average annual salary by the percent of cases requiring use of recruiters.

3. For each employee category, the cost of having someone actually provide on-the-job training is determined by multiplying the number of employees in that category by the trainer cost, taken at equivalent salary plus benefits.

4. For each employee category, the relocation cost is determined by multiplying the number of employees in that category by the relocation cost times the percentage requiring relocation.

The following table summarizes the results from these key cost savings elements:

Employee Category	Productivity Loss ($000)	Recruiting Cost ($000)	Trainer Costs ($000)	Relocation Costs ($000)	Total ($000)
Sales/Marketing	241	111	36	120	508
Senior Technical	326	226	52	127	731
Other Technical	306	282	46	187	821
Services	9	12	1	0	22
Finance & Administration	6	5	1	0	12
Total	**888**	**636**	**136**	**434**	**2094**

The total is $2,094,000 for the costs avoided by NMD by acquiring a portion of the assembled work force from Interlink. This figure must be adjusted to recognize that these savings are before taxes. Using a tax rate of 34%, the value would be reduced to $1,382,000.

While there is normally a fairly high employee turnover in the computer software and services industry, NMD has had good experience in retaining its employees, particularly the more senior and more highly skilled individuals. Therefore, we would recommend amortizing the assembled work force value over an eight-year period, at the end of which time there would be less than 20% of the acquired employees still on the NMD payroll.

Interlink Customer Base and Crossover
NMD Product Purchases Valuation

Based on historic customer base information provided by Interlink and strategic plans provided by NMD, BGAI has determined the net present value of the projected additional operating income which NMD can realistically expect to obtain from Interlink's existing customers because of their purchase of other NMD products (e.g., other products in the Solve family).

NMD has just two Solve products which would be of direct interest and value to many of the Interlink customers as of the date of acquisition: Solve:Netmaster for TCP/IP and Solve:Netmaster for SNA.

All of the acquired Interlink customers are potential buyers of these Solve products. The table below shows the number of Interlink customers as of the date of acquisition subdivided between large, medium and small accounts (based on Interlink revenues from the accounts) and the expected percentage of these customers who would buy each of the Solve products over the next five years:

Crossover Buyer Analysis

	Large	Medium	Small	Total
Number of Non-Overlapped Interlink Customers as of Acquisition date	64	128	448	640
Solve:NIP				
% who will buy	90	70	30	–
# who will buy	58	90	134	282
Solve:NSNA				
% who will buy	20	20	20	–
# who will buy	13	26	90	129

The Interlink customer base includes all customers both in North America and International and has been adjusted downward to reflect the approximate 20% overlap with NMD customers.

The reason for the high purchase percentages for Solve:NIP is the close relationship which this NMD product has with the Interlink TCPaccess product. As used in Appendix J, the percentages take into consideration the erosion of the Interlink customer base for all reasons.

The incremental Interlink customer figures have been used to determine the revenues calculated in Appendix J for Solve:NIP. The other assumptions for Solve:NIP are summarized below:

Solve:NIP

Product Assumptions	Large	Medium	Small
Price/Unit ($000)	70	42	28
Add-on/Upgrade (%)	20	15	10
Maintenance Retention Rate	.9→.85	.90→.75	.85→.65
Maintenance Rate	.18	.18	.18
Services $/New Sale	5	5	5

All customers will take maintenance for the first year. The operating income margins will stay at 40% over the seven-year valuation period.

The following assumptions were used in determining the net present value of the operating income:

- North America tax rate – 34%; International tax rate – 32%
- Discount rate (after tax) – 15%

Appendix J, Tables 11, 12, 21, 22, 31 and 41, show these calculations for Solve:NIP.

The incremental Interlink customer figures have also been used to determine the revenues calculated in Appendix J for Solve:NSNA. The other assumptions for Solve:NSNA are summarized below:

Solve:NSNA

Product Assumptions	Large	Medium	Small
Price/Unit ($000)	80	50	25
Add-on/Upgrade (%)	20	15	10
Maintenance Retention Rate	.95→.85	.90→.75	.85→.65
Maintenance Rate	.18	.18	.18
Services	none	none	none

All customers will take maintenance for the first year. The operating income margins will stay at 40% over the seven-year valuation period.

The following assumptions were used in determining the net present value of the operating income:

- North America tax rate – 34%; International tax rate – 32%
- Discount rate (after tax) – 15%

Appendix J, Tables 13, 14, 23, 24, 32 and 41, show these calculations for Solve:NSNA.

The total values are shown below:

($000)	Net Present Value
Solve:NIP	4,739
Solve:NSNA	1,923
Total	6,662

NMD should be able to receive sufficient revenue and operating income from the crossover sales projected for the current Interlink customer base to justify a $6,662,000 valuation to be amortized over ten years. While only a seven year forecast has been used, there would still be residual income from the installed accounts for an additional three years.

NEWS RELEASE

STERLING SOFTWARE COMPLETES COREDATA ACQUISITION

RemoteWorx joins SAMS storage management product portfolio

DALLAS, TX, July 30, 1999 – Sterling Software, Inc. (SSW-NYSE), a leader in end-to-end enterprise storage management, today announced that it has completed the acquisition of CoreData, Inc., a developer and supplier of backup software for remote and mobile PCs, in a cash acquisition. Other terms of the transaction were not disclosed.

With the acquisition, Sterling Software adds CoreData's RemoteWorx product to its SAMS product portfolio. Sterling Software's SAMS storage management products help ensure that mission-critical storage systems are continuously available. RemoteWorx provides remote and mobile PC users with centralized data management, remote asset discovery and reporting technology. CoreData's employees have joined the company's Storage Management Division.

"We are thrilled to add this technology to our other enterprise storage management products," said Sterling L. Williams, president and chief executive officer of Sterling Software. "It answers a crucial demand by our customers for increased ability to protect the critical corporate data that resides on laptops and on remote PCs. Our customers include some of the largest data centers in the world, and by enabling them to extend the reach of corporate data backups to include mobile and remote PCs, we are delivering on our promise to provide end-to-end enterprise data protection."

Sterling Software is a leading provider of software and services for the application development, information management, systems management and federal systems markets. The company is ranked among *Business Week's* 1998 "Info Tech 100" as one of the world's best performing information technology companies. Headquartered in Dallas, Sterling Software has a worldwide installed base of more than 20,000 customer sites and 3,700 employees in more than 90 offices worldwide. For more information on Sterling Software, visit the company's Web site at www.sterling.com

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Sterling Software to Acquire CoreData

RemoteWorx(TM) Will Join SAMS Family of Storage Management Products; Enterprise-Class Desktop Storage Management to Be Added to Technology Portfolio

DALLAS, July 13 /PRNewswire/ -- Sterling Software, Inc. (NYSE: SSW), the leader in end-to-end enterprise storage management, today announced an agreement to acquire CoreData, Inc., one of the industry's leading developers and suppliers of backup software for remote and mobile PCs, in a cash acquisition. The companies anticipate completing the transaction in late July 1999. Other terms of the transaction were not disclosed.

"CoreData marks our 34th acquisition -- and the second for our storage management business this year," said Sterling L. Williams, president and chief executive officer of Sterling Software. "We're especially excited about this acquisition because CoreData's primary market, the backup of mobile and remote PCs, is growing like wildfire. Today, hundreds of millions of dollars worth of critical corporate data is carried on laptops around the world. Now, Sterling Software will be able to protect that remote -- but vital -- data with an enterprise-class product."

As part of the transaction, Sterling Software will acquire RemoteWorx(TM), CoreData's key product, which provides remote and mobile PC users with "automatic and invisible" data protection. Sterling Software also plans to incorporate this leading-edge technology into its other enterprise storage management products. The technology incorporates centralized data management, remote asset discovery and reporting technology -- critical steps in addressing the problems associated with desktop storage management.

According to Mike Harvey, president of Sterling Software's Systems Management Group: "We understand what it takes to manage critical data and devices from end-to-end across the enterprise, and the PC has become a significant link in this chain. Where the device resides -- a laptop on an airplane or a desktop in a branch office -- is irrelevant. Managing and protecting the data, however, is extremely relevant. That's why this acquisition is so important to us. It will enable us to deliver storage tools that manage data and devices from the desktop to the data center, across a private network or the Internet."

Jim Parker, co-founder and president of CoreData, said: "We know we're joining a company that is deeply committed to the storage management market. As we continue the development of RemoteWorx, Sterling Software's vision, strategy, leadership and financial strength will ensure our combined success. Sterling Software's worldwide presence in storage management will also benefit CoreData's existing customers, partners and prospects."

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RemoteWorx is the latest product to join Sterling Software's SAMS family of storage management tools. Recently, the company acquired SAMS:Alexandria, the high-performance UNIX and NT backup and media management product. Sterling Software's SAMS storage management products deliver unparalleled, field-proven management and control capabilities across the enterprise. These products help ensure that mission-critical storage systems are continuously available.

Founded in 1995, CoreData is a privately held company based in Phoenix, Arizona. In addition to developing backup software for remote and mobile computers, CoreData also develops OEM technology for integration into other industry-leading products. For more information on CoreData, visit the company's Web site at www.coredata.com.

Sterling Software is a leading provider of software and services for the application development, information management, systems management and federal systems markets. The company is ranked among Business Week's 1998 "Info Tech 100" as one of the world's best performing information technology companies. Headquartered in Dallas, Sterling Software has a worldwide installed base of more than 20,000 customer sites and 3,700 employees in more than 90 offices worldwide. For more information on Sterling Software, visit the company's Web site at www.sterling.com.

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