SAG HARBOR GROUP

TO: XXXX
       SENIOR VICE PRESIDENT AND CHIEF MARKETING OFFICER

FROM: JIM HENRY, ANDRES CARVALLO, EILEEN MCGINNIS, AND DAN BENDERLY
       SAG HARBOR GROUP

SUBJECT: PROPOSAL, PRICING PROJECT

DATE: 10/25/01

CC: FILE (XXX 01)

Dear XXX,

Following up on our conversation this week, this proposal describes how Sag Harbor Group might be able to help you with the "market discovery" phase of your enterprise pricing project. It summarizes our understanding of your requirements, discusses the main elements of the work plan and our deliverables over the next six weeks, and provides an estimate of our staffing requirements and professional fees. We have also attached brief sketches of the SHG consultants who are available to staff this project.

Overall, it seems to us that XXX is in an excellent position to use creative enterprise pricing as an important competitive weapon, driving adoption of the XXXXXXXXX platform and packaged solutions into new customer segments, reducing sales cycles, securing broader use among departments within existing customers, and making it easier for channel partners to generate revenue. We are excited about working with you on this important project !

1. Background/ Situation.

At the risk of restating facts that are already well known to you, the following is a brief description of the context for this effort. It is based on our own quick "ransacking" of industry websites and the publicly-available literature. It will help get our team on the same page and agree on an initial set of issues and hypotheses.

❑   **The Basics**

XXX is a $935 million revenue software company with about 4800 employees and 175 offices around the world. Founded in 1985, it is now widely regarded as one of the top 2-3 leaders – in terms of both "vision" and "execution" -- in the closely-related but distinct markets for (1) mechanical design automation (MDA) and (2) "product design/ development infrastructure" systems, solutions, and services.

Originally XXX won its spurs on the basis of innovative parametric solid modeling technology in the MDA "tools" market. MDA software is still for the most part sold direct, with a heavy dose of

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1

custom installation, to the engineering departments of large corporate customers, mainly for intra-departmental use. This year, XXX's MDA products and services – led by its "Pro/ Engineer" product family – will still account for 80 percent of its revenues (≈ half US) and the vast majority of its 32,000 customers. According to industry analysts, XXX now has about 20 percent of the 1 million+ worldwide seats in the "higher end" corporate MDA market.

Some observers believed that the MDA market was already mature even when XXX was founded back in the mid-1980s. But in the last few years it has certainly become much more mature. New licenses revenues now account for less than 10 percent of total license revenue, and while average (total) per-seat revenue still exceeds $14,000, competition from lower-end systems is increasing. XXX has several technical and sales channel initiatives under way to improve its MDA share and margins. However, revenue growth from MDA licenses and services is flat or declining, even apart from current economic conditions. So XXX is looking elsewhere for future growth, especially to XXXXXXXXX

❑ **XXXXXXXXX vs. MDA**

XXX's XXXXXXXXX's first generation was developed by a Minnesota startup that was founded in 1996 by Jim Heppelman, an xControl Data/ SRDC executive who set out to build a Web applications server that could support product development. It made its way to XXX by way of Computervision, which XXX acquired in late 1997. By now the product is on its sixth version, which was just released in July.

While MDA products like Pro/ E are focused on providing design tools and services to engineering departments, XXXXXXXXXis focused on enterprise collaboration, facilitating the whole product design process. In complex organizations this involves the coordination of multiple teams across engineering, manufacturing, product marketing, sales, and testing departments, plus multiple customers and suppliers. Since decisions taken at this design stage account for up to 80 percent of downstream product performance and cost, improving the coordination of the overall "design chain" can yields high payoffs.

This approach has already found strong acceptance among a growing number of XXX's core customers, although the product is some way from from financial breakeven. This fiscal year Windchill's total software and services revenues were $214 million, with about 500 customers, including 167 "production accounts." pilot. XXX XXXXXXXXXhas been adding customers at 50-60 per quarter this quarter, and its total revenues have been growing at 22 percent a year (related services at +45% a year). Table 1 below summarizes some of the key contrasts between XXX's

Table 1.	2001 Fiscal Year	
	MDA	
Total Revenue ($MM)	$721	$214
Revenue Growth (%)	-5%	22%
Services %	58%	55%
Services Growth %	?	45%
Installed Base (Seats)	200,000?	110,000?
Ave license rev per new seat	$1,489	$563
Ave seats per new customer	6-10?	353
"Production"customers	?	167
Total customers	32,000?	500+
ASP	$14,000	1,350

Source: Merrill Lynch (10/16/2001),SHG analysis

MDM-related revenues and its XXXXXXXXXrevenues.

As noted here, XXXXXXXXXdiffers from the MDA product line in several respects. Most important, it is has a much lower average cost per seat and a much larger appetite for seats per enterprise – even before the new enterprise pricing model. This is inherent in Windchill's focus on enabling collaboration across the enterprise design team. This will be reinforced by several strategy initiatives that are now unfolding -- (1) the separation of a XXXXXXXXX"enterprise platform" from a suite of discrete "packaged solutions" that run on top of it; (2) the development of a pricing model that drives enterprise-wide adoption of this platform, rewards customers for standardizing on XXX solutions, and reinforces XXX's channel strategy; and (3) increased reliance on indirect sales and services channels.

❑ **Competitive Landscape**

From a competitive standpoint XXX has already established an early lead in the its "design infrastructure" arena, ahead of key direct competitors, including EDS (with its recent UGS and SDRC acquisitions), IBM/Dassault Systemes (which are global channel partners for Dassault's Enova platform), and MatrixOne.

All these players are still finding their footing in this nascent ≈ $1+ billion "design infrastructure" market. However, the real battle is not just for this interesting little niche. The overall product design/development process has important overlaps with "enterprise resource planning" (ERP) and "customer relationship management" (CRM). On the margin XXX Windchill's most important future competitors include most other major enterprise software players – ERP players like SAP, Oracle, i2, Ariba, and Peoplesoft, and CRM players like Siebel, Kana, Chordiant, and E.piphany. Already SAP (with its expanded PLM module, which by some accounts is being offered for free with an R3 upgrade), i2, and Oracle have started to move in this direction.

This is an important development for us to understand, since these giants may try to exploit their potential bundling/platform power with respect to pricing, and limit our options. On the other hand, there may also be an opportunity to use our entrenched position in engineering/design to grab some share from these leaders in the much larger (+$40 billion) ERP/CRM enterprise application market

There is also a host of players that are focused on the generic enterprise "live collaboration/ e:learning/ emeeting" software and services market, including IBM/Lotus (Sametime/Quickplace), Centra, XXX, Webex, Placeware, eRoom, Groove, and Raindance, and still others, like Newscale and Agea, that are pitching enterprise-wide services collaboration. So far there is no dominant player in "live collaboration," and many products are technically unsound, in terms of scalability, reliability, and design. So there may be growth opportunities there as well.

In short, many players, large and small, are now converging on the "enterprise live collaboration software market" from different directions. It will be important to keep an eye on more than just XXX Windchill's immediate competitors, not only for the sake of pricing strategy, but also for the sake of product design, positioning, partnering opportunities, and pure defense.

❑ **Disaggregating XXXXXXXXX - Key Objectives**

Until V.6 appeared in July, XXXXXXXXXwas sold *en bloc*, with particular process management applications left for customers to develop on a custom basis with the help of systems integrators and third-party developers. A year ago Windchill's product managers began to consider distinguishing its

"core platform" or application server, from a series of discrete "packaged solutions/applications" that run on top of it. This disaggregation has several key strategy goals:

❑ Making it easier for customer to understand the value of the platform, and purchase key (interoperable) units of this value according to their needs; delivering more of the XX platform's value in immediately- accessible "ready-to'wear" applications;

❑ Shortening the adoption/pilot/ deployment cycle, which has introduced a six-nine month lag between initial trials and full deployment in many customers;

❑ Encouraging companies to standardize on the XX platform across departments;

❑ Enhancing XXX's reputation as a provider of strategic enterprise-wide solutions;

❑ Facilitating sales to the SME segment, which has fewer internal resources to devote to application development and deployment

❑ Enabling sales by indirect channels that find it easier to handle packaged solutions;

❑ Capturing more of the XX platform's value ("consumer surplus"), by charging customers different prices according to their valuations of specific applications;

❑ Gaining control over unconstrained discounting by XX's sales force, which is partly due to the fact that customers have been unable to purchase XX in more digestible bites, according to their needs;

❑ Distinguishing XXX from its competitors, some of which are struggling to formulate coherent enterprise platform/ solutions models.

As of now, two such solutions are shipping – PartsCatalogue and Project Collaboration. A third will ship by December 10th, and three more are planned for next year.

II. Key Pricing Issues – The XX Enterprise Platform and Packaged Solutions

The imminent appearance of all these solutions provides the occasion for rethinking XX's current approach to pricing. Up to now XX has offered customers just two options – for the platform as a whole, either a standard perpetual license (a combination of per-server and per-user upfront fees, plus annual maintenance) or an annual subscription fee per concurrent user, with server and maintenance included.[1] From the standpoint of realizing the goals listed above, this model clearly needs a revision. However, as described further in the Appendix, there are many alternatives for enterprise pricing to choose from, with many variations.

In the short time frame available for this project it is important for us to focus quickly on the key issues. These include the following:

❑ **What Basic Metrics/ Structure to Use?** We can always produce custom quotes for any customer that is large enough. But the basic aim of a pricing model is to decentralize pricing to the sales channels and provide correct incentives, defensible standards, and administratively-simple frameworks to customers and channel partners.

❑ From this standpoint, all the conventional enterprise pricing alternatives have serious pros and cons; there is no perfect solution. (See Table 2 below.) Choosing among them depends on taking a close look at what competitors are doing in specific markets, and at what customers and channel partners prefer.
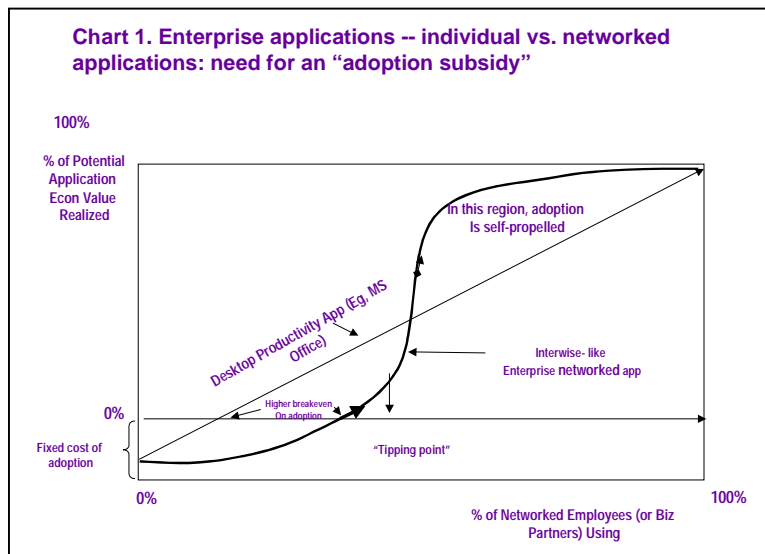
Table 2. Basic Enterprise Software Pricing Metric Alternatives			
Metrics:	**Examples**	**Pros**	**Cons**
Per Concurrent User	Centra, Webex, XXX,	Easy for discrete teams, classes, with predictable sizes	Admin. costs; Discourages enterprise-wise use, occasional users Higher MC of use
Per Registered User	XXX	Works well with small numbers of predictable, recurrent users	Administration cost – license management (large organizations, where users change faster than desks)
Per Desktop	Siebel, Oracle, IBM, MS	Lower admin costs for larger orgs, variable teams;	High fixed cost may discourage adoption
Per Server	Chordiant, Siebel, MS	Easy admin (CIO, sales force) Per location, per dept., or site license is simple extension	High fixed cost discourages adoption Can't assign costs to use Value left on table (zero marginal cost)
"Utility pricing" – fixed cost + usage-based	HP, Sun, MS XP . net	Low entry costs – pay as you go system Easy to assign costs	Administration costs (monitoring, billing)? Lower switching costs More costly for heavy users

❑ **How to Value the Platform and Separate Solutions?** Another basic issue for the platform/solutions approach is how to value the enterprise-wide platform, and how to make it available on less than an enterprise –wide basis. In the case of XX V.6 -- unlike, say, Oracle's data base platform or an e-meeting platform -- the raw XX platform doesn't do very much on a stand-alone basis, at least right now. Nor is it an "open" development platform that would support other developers' applications -- and presumably this is not an option that XXX is considering (

thought it might be interesting).[1] If, for example, the platform could just provide first-rate, though basic, live collaboration features like white boarding, VOIP, and presentation sharing to all enterprise desktops, that might make it easier to price it on an enterprise-wide basis above zero. If not, this could be an important challenge. Since the platform will presumably be customizable even after the packaged solutions approach is adopted, customers could essentially get what they're paying for today for nothing.

❑   Pricing individual packaged solutions, and various "suites" of them, requires a close look at competitive alternatives, potential customer demand, the additional value that customers may realize from using them jointly, and the complexity costs from having multiple bundles and individual offers.

❑   **Trial Pricing – How to Integrate?**   Yet another key issue for enterprise platform/solutions pricing is that in order to encourage platform adoption, the price structure has to take into account the fact that enterprise buyers (CIOs, etc.) often have no idea how much use the platform will actually get – especially if (as here) packaged solutions have not been finished, the platform itself provides little utility, and the value of the platform is *increasing* in the proportion of enterprise users that use it. (See Chart 1 below.)

Chart 1. Enterprise applications -- individual vs. networked applications: need for an "adoption subsidy"

 As this diagram shows, in the case of collaboration and networking applications like XX, the value of the platform – unlike, say, Microsoft Office – is not linear in the number of desktops that have it. Realizing its value depends on having a certain level of penetration within the organization, after which the value increases sharply. It may also increase with the number of separate application solutions that are available at once, enterprise-wide, if these can interoperate and reinforce each other's value.

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[1] Historically, platform providers that opened their platforms to third –party vendors have often beaten the competition – the latest example is NTT DoCoMo's I-mode, compared with the ill-fated WAP wireless platform.

All this argues for a pricing structure that makes trial pricing and bundled pricing an integral part of the model, rather than an ad hoc adjustment to it.

❑ **Should There Be Different License Classes?** In the case of collaboration applications, it is easy to imagine several different classes of licenses -- for example, one kind for "heavy users" or core team participants that allows full rights to use the software (initiate and participate in collaborations, etc.), and another "light/ occasional use" license that that has more restrictions. Standard per-seat models don't make these distinctions. They require the enterprise to pay full boat for every desktop. But subject to administrative complexity and competitive forces, it might be desirable to offer customers this option.

❑ **How to Integrate Professional Services?** Since systems integration services now account for more than half of all revenue generated by XX, and since offering packaged solutions is likely to impact these revenues, it is also important to developed *packaged service pricing* alongside solutions pricing. Since XXX is increasingly relying on outside professional services providers like Accenture, it will be important to have their inputs in designing these support packages.

❑ **Fine-Tuning Vs. Simplification – Striking The Right Balance.** There is a natural tendency for software pricing models to become needlessly complex. This is such an issue for enterprise customers, because, properly administered, the company's entire pricing model should never be shared with them anyway. But the sheer hidden cost of administering 300-page pricing manuals (in the case of Cisco's IOS) or a 179 page one (in the case of XXX) can be significant, in terms of billing, tracking, accounting, sales force education, updating, and just the sheer lack of transparency.

❑ This is largely due to the fact that the market for enterprise software products is so imperfect -- unlike, say, the market for #1 red wheat, where one public spot price is available to all buyers and sellers. The result is an endless number of arbitrary variations – quantity breaks, alternative subscription periods, perpetual vs. subscription offers, trial discounts, bundled prices, credits for corporate wide buying, and so forth. Fortunately, in our experience, it is often possible to eliminate much of this dysfunctional complexity with just a little bit of systematic input from customers.

III. SHG's Recommended Approach -- Project Scope and Timing

The definition of victory for this project is to come up with an enterprise pricing model that makes (1) helps differentiate XX from its competitors, (2) meets customer and channel partner requirements, (3) is easy to administer, and, most important, (4) provides customers and channel partners with incentives to standardize on XX products and services sooner rather than later, providing XXX more strategic options down the road.

To accomplish this, we propose the following 6-week "market discovery" project, to be started upon your acceptance of this proposal.

This project would include three 2-week phases -- (1) competitive pricing, (2) enterprise pricing model alternatives, and (3) testing with key XX audiences, including channel partners and customers. There will be an onsite progress reviews at the end of each phase.

1. Competitive Pricing Review (2 weeks)

Work Elements/ Deliverables. The first two weeks of this project will focus on identifying what XXX Windchill's direct competitors and other leading enterprise software companies are doing with respect to enterprise pricing and platforms. Subject to your agreement on precise list, we would propose to deliver a detailed profile on the pricing strategies employed by the most important enterprise software providers, including SAP, IBM, Dassault Systemes, EDS, MatrixOne, Oracle, Microsoft, Centric, Siebel, and i2, plus the leading collaboration players noted earlier. Our data sources include interviews with key enterprise players, industry analysts, financial analysts, and knowledgeable XXX staff, and a review of publicly-available web sites and literature. We would also develop a perspective on the strategic intent and likely industry dynamics of these various players, with respect to their near-term enterprise platform strategies.

2. Alternative Pricing Models (2 weeks)

Work Elements/ Deliverables. Based in part on the competitive review above, we would work with you to specify a set of 3-4 alternative pricing models, including proposed answers to the key issues noted above about pricing structure. We'd also work with you and Ed Herdeich to help you evaluate the impacts of these alternative pricing models, examining (a) their consistency with existing pricing arrangements, (b) potential financial impacts, and (c) overall pros and cons.

3. Customer/ Channel Partner/ Analyst Evaluation (2 weeks).

Work Elements/ Deliverables. The main task here is to test the 3-4 models that the team has come up with up against interviews with a small sample of your customers and channel partners, as well as industry analysts. The objective is incorporate their feedback in a core pricing model that addresses the issues posed above in Section II – preferred metrics, platform and solution list price levels, trial pricing approach, license classes, professional service packages, and simplification.

4. Other Related Strategic Issues. SHG also looks forward to helping out with other XXX strategic marketing issues that may emerge along the way, including the development of a clearer customer ROI model for the platform, positioning "white papers," developing sales force incentives that reinforce the twin goals of share growth and profitability, and the development of other channel partners.

Proposed Contract

(Terms omitted).

If these terms are acceptable, please sign this document below and fax it back to us at 631-725-7994. We will sign the copy, fax it to you, and also send a hard copy to you by mail. Our objective is to put these arrangements in place in time for a full-speed start on or about the week of October 22, 2001.

If you have any questions, I will be available today on my cell phone at 516-721-1452, or by email at Jhenry@sagharbor.com.

Once again, we look forward to working with you and your team on this path-breaking project !

_____
Jim Henry
Managing Director
Sag Harbor Group   Date: _____

Accepted and Approved:

_____   Date:_____

APPENDIX 1. – ALTERNATIVE SOFTWARE PRICING MODELS

XXX may be able to learn from the examples of other companies that have done enterprise software or services pricing. The following is a short description of the most important enterprise software alternatives that have been tried.

❑ **"Per Server" Capacity-Based Pricing.** The oldest and still the most popular "capacity-based' pricing model for on-site enterprise applications software was originally introduced in the days before networking by IBM,   for mainframe applications and database software. It relied on **per-server, per-CPU, or per MHz** metrics, independent of the number of actual or potential users**,** with software costs actually increasing with the power of the hardware, and software licenses often tied to a particular CPU or "node."   The contract usually consists of a "perpetual" upfront license, with annual maintenance and technical support, although players like IBM, CA, and Microsoft have also offered shorter-term (2-5 year) agreements and lease-like payment schedules for per-server agreements –- the term structure of payments is really independent of the pricing metric.

While such capacity metrics are a rough indication of user value, especially with networked applications, more than a quarter of US CIOs still say they prefer per-server pricing to other alternatives because it reduces administration[2] -- there is no need to track actual users or even estimate actual or potential users.   In an Internet world where applications are accessible from standard browsers without special clients, and the number of "users" at suppliers, customers and channel partners[3] is often hard to estimate, this model is also now offered as at least one option by a variety of enterprise software vendors – including Siebel, Chordiant,[4] Sybase,[5] and Microsoft.[6]

"Per User"/ Per –Seat Pricing. Software vendors like Lotus and Microsoft that were rooted in the "desktop applications" tradition of the 1980s usually adopted pricing levels that took into account the number of actual or potential users in enterprises, rather than (just) the number of servers or CPUs. The rise of networked applications in the late 1980s also produced the notion that software licenses were the property of networks rather than particular CPUs, servers or desktops. These developments led to pricing based on "per-seat" metrics, including the number of concurrent users, actual named users, potential networked user or eligible desktops.[7]

Concurrent use and named user models, which have also been used for ASP services, require that some mechanism keep track of whether particular users are registered with the system, or how many users are on the application at any one time, or both.

❑   In the case of client/ server messaging software that required proprietary clients, such as MS Exchange or Lotus Notes, the model **combined per server pricing with per client** licenses. In the limiting case, where enterprises or individual facilities are large enough, licensing has been done on the basis of total employees, customer revenue, or projected future purchases, and it might become an **enterprise-wide or site license**, permitting a licensee to deploy as many servers and clients or browsers as it wanted, without additional cost.[8]

❑ Once again, although the standard form of this "per user" pricing model was the upfront license purchase with maintenance, it could also take the form of a "lease," with a longer term series of levelized payments, or an annual (or more frequent) subscription.

Actual Software Usage-Based Pricing. By the late 1990s, several trends started to build support for the notion that enterprise software pricing ought to be based on some measure of actual usage, rather than capacity, whether "server-" or "seat" –based.

First, even before the recent slowdown, CIOs were under increasing pressure to improve IT productivity, and to consider outsourcing their IT departments or turning them into "profit-centers," charging transfers prices for their services to internal and external customers. Second, the boom in ERP, CRM, SFA, SCM, and other enterprise software category sales, on top of ordinary desktop productivity and messaging applications, drew attention to the question of precisely how value these multimillion dollar software purchases really were. Third, the rise of "application service providers" and application hosting began to provide an outside benchmark and a substitute for internal "on-site" software.

The result of all this was a demand on the part of enterprise customers – especially CIOs – for software and hardware pricing that is more closely tied to actual use, or at least permits customers to have more freedom than is provided by traditional perpetual ownership or licensing. One version of this has recently been offered by HP, which has started licensing its servers on the basis of "two-part" pricing usually associated with utilities – a fixed monthly charge that is independent of use, and a variable charge that depends on the average maximum use that is made of a particular server.

Another model, which is less directly tied to use, but does provide more flexibility for customers, is Microsoft's new Assurance subscription program. In its XP Office Assurance program, for example, it now permits customers to sign up for "rights to use" any Office products for two years, for $220, including technical support and upgrades. Enterprise customers with at least 250 eligible desktops who commit to enterprise-wide rollouts are permitted to sign up for three-four year minimum term subscriptions, renewable for 1-3 years, with pricing that depends on the total number of "eligible desktops" (in four classes – 250 – 2399, 2400 – 5999, 6000- 14999, and 15000+), and the total number of other Microsoft products purchased by the overall corporation.

While IBM/Lotus has so far resisted this kind of "subscription" model, it also recently introduced a unified, cross-product licensing program that provides corporations with discounts based on (a) their total users, and (b) their total corporate-wide purchases to date.

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OCTOBER 2001

Since 1992 the Sag Harbor Group has been helping clients understand the intersection of technology and competitive strategy issues in technology-based businesses, mainly in the telecommunications, software, financial services, biotech, and Internet industries. It has served such leading clients as AT&T Corp., A.B.B., A.T. Kearney, the Calvert Fund, Cemex, ChinaTrust/the Koo Group, the F.B.I., GM, IBM/ Lotus Development, Interwise, Lucent, Merrill Lynch, Monitor Company, PageNet do Brasil, Peoplink.org, Polaroid, the Government of Spain (Extremadura), South Africa Telecom, the Rockefeller Foundation, the Swedish Government, TransAlta Utilities, UBS, Volvo, and Xerox. The following biographies provide an overview of Sag Harbor Group's team.

JAMES S. HENRY

Managing Director, Sag Harbor Group. Mr. Henry is a leading management consultant, with a special emphasis on competitive technology strategies. He has served as VP Strategy, Lotus Development Corporation; Firm Economist, McKinsey & Company; and Manager, Business Development/ Chairman's Office, GE. He has managed projects on a wide variety of strategy issues for many prominent multinational companies. He is a founding partner of International Venture Partners, a direct equity investment firm based in San Paulo, Brazil.

Mr. Henry has also written extensively about business and technology issues. His articles have appeared in The New York Times, The Wall Street Journal, The New Republic, The Washington Post, U.S. News and World Report, Manhattan Inc., Harpers, The Washington Monthly, Fortune Magazine, Business Week, Newsweek, Time Magazine, The Tax Lawyer, International Development Report, Jornal do Brasil, The Manilla Chronicle, La Nacion, and El Financiero. He is also the author of several books and anthologies. His work has taken him to many emerging markets, including Russia, China, the Philippines, South Africa, Namibia, the Sudan, Brazil, Venezuela, Chile, Zimbabwe and Mexico. He is an honors graduate of Harvard College (B.A., Social Studies, Phi Beta Kappa), The Harvard Law School (J.D.), The Harvard Graduate School of Arts and Sciences (M.S. Economics), and a member of the New York Bar since 1978. He and his two children live in New York City and Sag Harbor, New York.

ANDRES CARVALLO

Mr. Carvallo is the former chairman and CEO of Agea Corporation, an enterprise wireless applications software company funded by Sun Microsystems. Before Agea, Mr. Carvallo was EVP/COO at iMark.com, a B2B exchange which sold to FreeMarkets in 2000 (NASDAQ: FMKT). Prior to iMark.com, Mr. Carvallo was Vice President of Sales and Marketing of Tycho Networks, a tier-one ISP/CLEC offering voice and data services which sold to DSL.net in 1999 (NASDAQ: DSLN). Before Tycho, Mr. Carvallo was a president of Phillips Electronics' $2.5 billion Wireless Division which designed, made and commercialized PCS and cellular phones and pagers. Prior to

Phillips, Mr. Carvallo was a general manager for the $1.5 Billion Personal Computer Business Unit at Digital Equipment Corporation. Before Digital, Mr. Carvallo was a general manager for international operations at Borland; and a regional manager and a product manager at the Santa Cruz Operation. Mr. Carvallo started his career as a product manager for Windows and MS-DOS at Microsoft. Mr. Carvallo studied Mechanical Engineering at the University of Kansas, Advanced Management at Stanford University, and Total Quality Management at Wharton.He was born in Venezuela, South America and is fluent in English, Spanish, and Portuguese.

DAN E. BENDERLY

Senior Consultant, Sag Harbor Group. Mr. Benderly has over 10 years of experience building telecommunications businesses around the world. He was a co-founder and Senior Vice President, Corporate Development for Global Wireless Holdings, a start-up facilities-based wireless data operator offering business-to-business applications in Latin America and Asia. He previously served as Director of Business Development for GTS where he managed the execution of the company's development strategy, identifying local partners and structuring and negotiating joint ventures around the world, as well as assisting in the initial implementation of those operations. In addition, he was responsible for obtaining substantial project financing commitments from major international financial institutions for GTS' local telecommunications operations. Prior to GTS, he served in the volunteer MBA Enterprise Corps, assisting a locally owned Hungarian start-up telecommunications company, where he succeeded in bringing the first commercial VSAT satellite services to Central and Eastern Europe. Mr. Benderly holds a B.E. degree in Engineering from Cooper Union and an M.B.A. from Columbia University.

EILEEN MCGINNIS

Senior Consultant, Sag Harbor Group. Ms. McGinnis specializes in networking and Internet communications software, software engineering management, and e-commerce strategies. With more that 25 years of experience, she has brought many products to market, specializing since 1989 in emerging, network-enabled, technologies. She has served a VP Engineering- Electric Communities, Engineering Director-Sun Microsystems for the Advanced Products, Digital Media and Telephony Groups, Business Development Director – Sun Microsystems, Senior Manager for Graphics Software Sun Microsystems and Hewlett Packard, Researcher in Video Enhanced Graphics/HD Video at Hewlett Packard Labs, and Technical Manager, Government Systems, GTE Sylvania. At SHG, she recently led a major design and customer value project for a leading international telecommunications company's Internet services group. She has led the develop of e-commerce business plans for several startups, including a cable TV channel and a groupware start-up.

Ms. McGinnis has been a speaker at many software industry events, such as Java 1, and SIGGraph. Her international experience includes working closely with customers such as NTT and Siemens and she led the US negotiating team to ISO JTC1/SC24 WG2 for 3D computer graphics, successfully producing 3 international standards spearheaded by the US. She is a graduate of Tulane University (B.A. Mathematics) and Stanford University (M.S. Math, M.S. Computer Sciences). She received a National Science Foundation Fellowship and was a Woodrow Wilson Graduate Fellow. Born in North Carolina, and based in the Silicon Valley, she is fluent in English, French and several computer languages.

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[1] There many variations in the current 179 page XXX pricing manual, but one 30-concurrent user license for XXXXXXXXXprovides for monthly fees of $4700 per user, including maintenance and server, with a 12 month minimum subscription. The alternative perpetual license is $50,000 per server, plus $9000 annual maintenance, plus $1200 per user/ year. For 30 users, a four year repurchase cycle, and an 18% customer discount rate, the Net Present Cost per user is roughly $5300 for both alternatives; for higher discount rates, the perpetual license route is cheaper.

[2] See footnote 3.

[3] Especially for applications like supply chain management (SCM), demand chain management, and customer relationship management (CRM).

[4] Chordiant's basic CRM software is priced at $250,000 per 4 CPU server.

[5] Sybase, like Oracle and Microsoft, recently tried to introduce a pricing model that took into account not only the number of CPUs, but their processing power, to deal with rising hardware capacity. Oracle withdrew its "power-unit" model this summer after customers protested the implied cost increases.

[6] One version of Microsoft's latest Enterprise Agreements, for example, provides for per server/ per processor pricing for Microsoft Exchange Server, with unlimited clients per server.

[7] Microsoft's Enterprise Agreement Software v.6.0 pricing model, effective October 1, 2001, is based on the number of "eligible desktops" in an enterprise. For enterprises that are willing to standardize on Microsoft products and have at least 250 seats, the model allows them to sign up for either subscriptions or

[8] In the case of Peoplesoft's Extended Enterprise License, introduced in 1997, for example, enterprises were allowed to deploy an unlimited number of Peoplesoft 8 clients.

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