



# SDFForum news

## STRATEGIC ALLIANCES

Microsoft Corporation  
Sun Microsystems  
The Redevelopment Agency  
of City of San Jose

## PARTNERS

BEA Systems  
IBM Corporation  
Oracle Corporation

## CATALYSTS

Accel Partners  
New Enterprise Associates

## LEADERS

Advanced Technology Ventures  
Alta Partners  
BA Venture Partners  
BV Capital  
Comerica  
eBay Developers Program  
Garage Technology Ventures  
Greylock  
Hanson Bridgett Marcus Vlahos Rudy LLP  
Hummer Winblad Venture Partners  
Invest Northern Ireland  
Palomar Ventures  
PayPal Developer Network  
PricewaterhouseCoopers  
Sequoia Capital  
Sierra Ventures  
Silicon Valley Bank  
Thelen Reid & Priest LLP  
Trinet  
Woodside Fund

## STAKEHOLDERS

Altos Ventures  
The Career Company  
Gray, Cary, Ware and Freidenrich  
IDG Ventures  
Inductus Associates  
JETRO  
Morrison & Foerster LLP  
Panasonic Digital Concepts Center  
ProofPoint Ventures  
Red Rock Ventures  
Selby Venture Partners  
Sevin Rosen Funds  
White & Lee

## IN-KIND PARTNERS

Execustaff HR  
Ireland San Filippo LLP  
Salesforce.com  
Wilson Sonsini Goodrich & Rosati

## sponsor profile: SUN MICROSYSTEMS

### Sun<sup>sm</sup> Developer Network Program Helps Developers Get Things Done

Sun's commitment to developers has never been more obvious than in this past year. With an updated and expanded developer program, a convergence of resources into a single portal, and the launch of several new developer initiatives, Sun's renewed focus on developer needs is hitting the mark. Not only has the new web site earned top marks from an independent reviewer, but members of the Sun Developer Network program have noticed a difference as well.

As a result of extensive usability studies, focus groups, surveys, and in some cases, simply following developers around their workplace on a typical day, Sun has delivered enhancements to existing offerings and a set of new services that address the top needs that developers identified as being critical to their success. Through the sun.com/developers portal, developers can get things done.

#### Updated and Expanded Developer Program

The millions of members in the Java Developer Connection<sup>sm</sup>, Wireless Developer Connection, Solaris Developer Connection<sup>sm</sup>, and Forte<sup>sm</sup> communities of developers all had one common characteristic – an active relationship with Sun. To simplify and unify interaction across offerings and services, members of these communities are now part of the Sun

Developer Network (SDN) program.

The unification of these programs into a single SDN program enabled Sun to extend single sign-on across all developer services. Developers can login once, and get access to newsletters, forums, downloads, and more.

#### Additional program enhancements include:

- New newsletter publications, including the SDN Program News newsletter. The latest special offers, contests, and other exclusive notices are delivered to subscribers who want to be the first to know.
- New features in the forums are offered, such as increased participation from Sun engineers and expanded options when setting watches on threads. The forums are constantly growing to cover the wide range of topics that developers want to discuss.
- Additional resources are available to the Sun Software User Groups in the form of direct access to product managers and engineers. SDN sponsors quarterly user group meetings and secures knowledgeable speakers from Sun to provide information tailored to members' agenda requests.



*Continued on page five*

## IN THIS ISSUE

Service Oriented Architecture.....	6
event highlights.....	14
Negotiations Are Not a Game.....	15
Critical Path in Project Management.....	16
Distinguished Speaker Series.....	21



# SDFForum

SDFForum is the leading Silicon Valley not-for-profit organization providing an unbiased source of information, insight, and expertise to the technology community for the past 20 years. Each month, SDFForum reaches 1200 software professionals through more than 20 events that promote new technologies, businesses and practices that advance the industry. SDFForum currently has 2000 paying members and offers several different types of membership levels. For more information on SDFForum's memberships and programs, check out our website at [www.sdforum.org](http://www.sdforum.org). This newsletter is published as a bi-monthly feature by the Software Development Forum. Unless otherwise noted the entire contents are copyrighted and may not be reproduced in whole or in part without written permission from the Software Development Forum. Permission is given for the use of up to three paragraphs as long as full credit is provided.

## SDFForum office

111 West Saint John, Suite 200  
San Jose, CA 95113  
Phone: 408-494-8378 or 650-854-7219  
FAX: 408-494-8383

Join the SDFForum events e-mail list!  
Send the message "join" to [events-request@sdforum.org](mailto:events-request@sdforum.org)

## staff

**Executive Director:**  
Laura Merling,  
[laura@sdforum.org](mailto:laura@sdforum.org)

**Director of Volunteers:**  
Barbara Cass,  
[barbara@sdforum.org](mailto:barbara@sdforum.org)

**Director of Marketing:**  
Chris Del Selva,  
[chris@sdforum.org](mailto:chris@sdforum.org)

**Communications Manager:**  
Kim Murray, [kim@sdforum.org](mailto:kim@sdforum.org)

**Financial Controller:**  
Margo Hober, [margo@sdforum.org](mailto:margo@sdforum.org)

**Marketing Manager:**  
Julie Larson, [julie@sdforum.org](mailto:julie@sdforum.org)

**Marketing Program Manager:**  
Raya Fowler, [raya@sdforum.org](mailto:raya@sdforum.org)

**Member Services Manager:**  
Bridget DiMambro, [bridget@sdforum.org](mailto:bridget@sdforum.org)

**Office Manager:**  
Diana Schindler, [diana@sdforum.org](mailto:diana@sdforum.org)

## newsletter

Circulation: 4,000  
Creative & Production Services:  
Jon Madson, [lexxidesign.com](http://lexxidesign.com)

## advisors

Andrew Aitken, Olliance Group  
Joe Becker, Dolphin Ventures  
Rob Burgess, Macromedia  
Tom Byers, Stanford University  
Kaye Caldwell, Computer Software Industry Association  
Bill Coleman, Cassatt  
Esther Dyson, Edventure Holdings, Inc.  
Royal Farros, MessageCast  
Brian Gentile, Aspect Communications  
Ron Gonzales, Mayor, City of San Jose  
Ellen Hancock  
Sandy Herz  
Doug Kaewert, Sun Microsystems  
Steve Kirsch, Propel Software  
Mark Leslie, Leslie Ventures  
Ed Niehaus, Freedom Technology Ventures  
Jim Robbins, Software Business Cluster  
Heidi Roizen, Mobius Venture Capital  
David Schwab, Sierra Ventures  
Tim Scott, PricewaterhouseCoopers  
Robert Simon, Alta Partners  
Rod Smith, IBM  
Bill Tobin, PricewaterhouseCoopers

## board of directors

Scott Sandell, New Enterprise Associates, *Co-Chair*  
Ann Winblad, Hummer Winblad Venture Partners, *Co-Chair*  
Brian Goncher, Deloitte & Touche, *Treasurer*  
Aneel Bhusri, Greylock  
Sanford Rockowitz, Minaret Software  
Bill Grosso  
Joe Hedges, City of San Jose  
Stans Kleijnen, Sun Microsystems  
Dan'l Lewin, Microsoft  
Darlene Mann, Siperian  
Laura Merling, *Executive Director*  
Pete Solvik, Sigma Partner

## executive council

Andrew Aitken	David Lee
Jeannine Athas	Karen Lee
Jon Baer	David Nielsen
Tim Bailey	Sanford Rockowitz
Chuck Berg	Rosemary Remacle
Ames Cornish	Jim Schibler
Craig Diserens	Richard Taylor
Bill Grosso	

## sig chairs

Bioinformatics	Ramasubbu Venkatesh, Colin Wiel
Business Intelligence	Paul O'Rorke, Richard Taylor
Career Event	Robin Nakamura, Patti Wilson
Delphi	John Howard
Emerging Technology	Janice Carter, Bill Grosso
Founders Forum	Omar Baig, Chris Yeh
International	Jeannine Athas, Michael Ede
Java	Paul O'Rorke, Dave Yost
Marketing	Jim Schibler, Tammo Stubbe
Multimodal Interactive (Wireless Media/Voice)	Alex Chan, Joe Jasin
Open Source	Andrew Aitken, John Koenig
Security	Ames Cornish, Ira Victor
Software Architecture & Modeling	Ron Lichty, Aaron Ludtke
Software Engr. Mgmt.	David Brown, Stephen McHenry
Venture Finance	Steve Bennet, Tom Cervantez, Phil Korn
Web Services	Frank Cohen, David Nielsen
Windows	Chuck Berg, Dave Korn

## media sponsors

MIT Technology Review  
O'Reilly and Associates

## in-kind facilities

Hanson Bridgett Marcus Vlahos Rudy LLP,  
Microsoft Technology Center, Openwave



## sponsor profile: IBM

# 2004, the Year of Business Transformation

The technology business is moving at an unprecedented pace. The internet has made it much cheaper and more efficient to do business and most organizations are no longer limited to one geographical locale. Today, the IT industry is taking things a step further by developing software to help automate business processes.

As new skills and tools are needed to meet the challenges of globalization, companies around the world need to ensure their developers understand how technology can be applied to solve problems in different fields of business according to different industries.

Companies of all sizes, Integrators and Independent Software Vendors (ISVs) looking at different software environments are demanding cost-effective ways to address the changing requirements for transforming to an e-business on demand environment. IBM earlier this year announced its Software Development Platform based on clear-cut ROI advantages in terms of revenue growth, cost reduction, time-to-market, and quality. The message is clear: the IBM SDP is a foundation for partnering with IBM, opening the door to substantial advantages in terms of enabling on open-standards based solutions and going to market. In short, IBM's new initiative is a complete and configurable solution for building applications in an on demand world.

Just as we're seeing momentum with Linux becoming the operating system of choice, Eclipse will become the standard application development environment. As IBM is moving toward a single integrated application development environment based on Eclipse, developers will be able to integrate/pick & choose from a broader range of capabilities/choices than any competitive offerings.

Developers using the IBM Software Development Platform gain the benefit of the work offered by the other 150 companies that are also working with Eclipse. This means the open environment will adapt more quickly than any other in the industry, offering more opportunities for developers with unprecedented flexibility.

This year, complementing its offerings, IBM is expanding its portfolio of skill building events to help customers and partners benefit by adopting Linux, Web services and an integrated open approach to development that will help them be successful in today's global marketplace.

In 2003, over 25,000 developers attended 120 training events that focused on

**The depth and breadth of content provided by the IBM developerWorks Technical Briefing Days is critical to the future success of the IT industry.**

open standards based computing: e-business on demand, Web Services, and software development automation. Events in 71 cities worldwide included Paris, Munich, Rome, Sao Paolo, Santiago, Lima, Caracas, Hong Kong, Singapore and Taipei drawing local developers to our hands-on education and training programs. This year, IBM's live developer events are expected to reach 50,000 developers, double that of 2003, in nearly 100 cities around the world.

The new series will include events in major regional hotspots as well as smaller regional technical conferences in key geographies. Linux and Web services will again be represented, but this year, we're showing developers how to build an on demand e-business, which requires an operating environment to build, run and manage its

critical business applications, as well as how to globalize these applications for customers worldwide. Skills sessions will also be held to teach developers how to globalize their applications.

The free training and education provided in these developerWorks Technical Briefings will transform the way companies build applications by providing an open, unified approach for building, integrating, extending, modernizing and deploying an on demand operating environment. The depth and breadth of content provided by the IBM developerWorks Technical Briefing Days is critical to the future success of the IT industry.

*Gina Poole, VP, developer marketing/web communities, ISV & Developer Relations is based in Raleigh, North Carolina. She has WW developer programs that attract/enable individual developers, early adopters of technology, and independent software vendors to IBM with tools, technical information, code samples/demos/downloads, education, and interactive on-line resources. Gina manages IBM's developer community outreach effort to build relationships with software associations, networking groups, user groups, and students. She leads an international team of web, marketing/outreach professionals. She has held a number of management positions in IBM's software and personal computer divisions including: strategy & operations, Java technology and industry relationships, product management, software development, information development, & human factors. Gina is a certified Project Management Professional (PMP) and holds degrees in computer science, business management, and economics.*



## sponsor profile: JETRO

# Accelerating Technology Expansion between Japan and the U.S.

For the last three years, the U.S.- Japan Business Incubation Center, San Jose (U.S. – Japan BIC) has been a revolutionary place for entrepreneurial Japanese technology companies to fuse with the innovative corporations of Silicon Valley. U.S.- Japan BIC, located in San Jose, is sponsored by the Japan External Trade Organization (JETRO), a Japanese semi-governmental trade organization. For more than 50 years, JETRO has been promoting investment and trade between Japan and other countries.

As the first non-profit incubator exclusively for Japanese startups entering the Silicon Valley, the U.S.- Japan BIC (<http://www.jetrosf.org/bic/>) serves as a central point for the launch of Japan's cutting edge IT technology into competitive global markets. Companies in our incubation center have strong core competencies. Each company has been rigorously screened by Silicon Valley executives, JETRO members, and a team of Japanese business and academic experts, via a four-tier competitive process.

The U.S.- Japan BIC follows a Silicon Valley model in that the center is dedicated exclusively to very young startups and nurtures these companies with "soft services" including mentoring, presentation skills training, market research, seminars, and business development support. Since its opening in January 2001, the incubator has hosted more than 15 companies of which 9 have gone on to become "success stories," generating revenue from contracts with U.S. companies. Since graduating from the incubator, four of these companies, Elmic Systems, Improvista, VL Inc. and Trinity Security Systems are currently operating offices in the United States and continuing to grow their business.

One of the trends we have seen in the past few years is an increase in entrepreneurial Japanese software companies applying to our incubator. This may seem unusual for Japan

which has traditionally been known for developing and manufacturing leading edge hardware products, and could be indicative of a shift in IT trends in Japan toward more software innovation.

As of March 2004, there were four innovative companies doing business development from the incubator:

### **DynaTrek Inc., GALA Inc., Key Planning USA Inc., and Online Game Systems Inc.**

All of these companies are focused on unique software or infrastructure products and services and pursuing alliances with potential U.S. companies. Below are brief summaries of each company's core technology or product.

#### **DynaTrek, Inc. (<http://www.dynatrek.co.jp/en/index.html>)**

DynaTrek offers a software solution that provides organizations with Enterprise Information Integration (EII) heterogeneously among distributed databases using advanced technology. DynaTrek integrates and transforms information dynamically and rapidly. It allows users to search, transform, and integrate information from different databases, without requiring additional data storage. DynaTrek's key product is a Virtual Database System (patented in U.S.) that provides an ad hoc data-searching environment. The software virtually integrates various types of databases, so users can fully utilize the contents of their existing databases rapidly at low cost. The product is suitable for applications such as CRM, knowledge management, consolidated accounting, and system updates for project reorganizing.

#### **GALA Inc. (<http://www.gala.jp/e-corporate/index.html>)**

GALA is focused on the development of online communities and the overall manage-

ment of these social networks.

Additionally, the company provides collaborative marketing tools, which allow businesses to execute market research strategies that are mutually beneficial to both themselves and their customers. These tools allow companies to gain a firm grasp on their customer's feelings and opinions about their products, which in turn serves to drive demand. As a solutions provider, GALA strives to maximize the use of information gathered in online communities so that businesses can better meet the needs of their consumers. In 2000, the company completed a successful IPO in Japan.

#### **KEY Planning USA, Inc. (<http://www.key-planning.com>)**

KEY Planning focuses on the development of cost-effective, customizable office applications that serve various requirements of small and medium-size companies, including the need for computer telephony integration (CTI). The company's core strengths are in system design, serial (RS-232C) control, and web application technology. KEY Planning's primary product is TELWatcher - a cost effective, customizable CTI software that is not dependent on specific telephone equipment. In January, the company released a free trial version of TELWatcher Professional, which directly links telephone communication to a FileMaker database. This product streamlines the flow of customer information for maximum use by the members of an organization in an extremely user-friendly and cost effective manner. Other products include Barcode Express - an automation software that processes data from barcode scans.

*Continued on page 19*

---

## sponsor profile: SUN

*Continued from page one*

- There is a single portal through which all these developer content and services can be accessed: [sun.com/developers](http://sun.com/developers). With an unmatched array of technical content straight from the source of Java™ technology, a constant stream of new articles, and an intuitive navigation scheme to get to it all, the Sun Developer Network portal helps developers get things done.

These developer services along with technical articles and community support continue to be flagship member benefits. But SDN has expanded its developer program benefits to include more than great content, an active community, and all the software developers need to be productive.

### **New Developer Initiatives**

Successfully meeting the needs of developers means keeping up with changing marketplaces and evolving the Sun Developer Network offerings to address new challenges and opportunities that face developers. As new technologies

emerge, new trends shape the market landscape, and new industries are born, Sun Developer Network helps developers stay on top of these evolutions while continuing to get things done.

### **Recent additions to the program include:**

- Content Syndication. RSS feeds deliver headlines of articles added to the [sun.com/developers](http://sun.com/developers) site so developers can easily track new technical content being published. Subscribe to the feeds from the bottom right corner of the [sun.com/developers](http://sun.com/developers) site.
- For Your Business. Helping developers be successful includes providing resources to analyze business implications of their technology choices, tips on how to build a valuable network of contacts, and guides to necessary business skills. Developers wanting to explore new industries or learn how to advance their careers will find practical advice on how to do it.
- Special Offers. Sun Developer Network members get exclusive access to special offers from Sun and its partners. Examples of limited-time offers include a free server with a

software purchase, book discounts from a leading retail chain, and invitations to members-only events. Developers are notified through the SDN Program News newsletter.

- Inside Sun Developer Network. Go behind the scenes and get an inside look at the whys and hows of the Sun Developer Network program's evolution to its current incarnation. Find out where it's headed and how developers help shape its future.

These enhancements and additions to the Sun Developer Network program are the foundation of more great things to come. Sun invites developers to join the program and to join the process of shaping its future to better meet developer needs worldwide.

Join today! [sun.com/developers](http://sun.com/developers)

---

*BaoHuong Phan is a Senior Program Manager for Sun Developer Network, responsible for the SDN Mobility Program and various other program elements.*

ad - printer to paste



## Service Oriented Architecture

Over the last couple of years SOA has become a common term among IT architects. SOA's basic concepts – reusability, interoperability, and services – have been around for nearly 20 years. So what is new about SOA that is making it the architecture of choice for current enterprise application development? This article will list some of the principal benefits and characteristics of SOA, and suggest some organizational and technical “best practices” to consider during implementation.

### Definition

A Service-Oriented Architecture (SOA) is a software design approach allowing enterprises to focus on business processes in their application development, rather than focusing at a lower level on integration or application issues. An SOA is a collection of reusable networked services, communicating through well-defined, platform-independent interfaces. These services provide access to data, business processes, and IT infrastructure, and they allow for service provision, consumption, and lifecycle management.

### Benefits

Application integration is one of the most critical issues faced by enterprise information technology managers. Traditional application development and integration approaches have been inflexible and not standards-based; they have not, therefore, facilitated an agile enterprise IT environment that can support a dynamic organization.

Three common application integration methodologies have been point-to-point integration, enterprise message bus or middleware integration (also known as enterprise application integration or EAI), and business process-based integration. These approaches can be complex, costly, and inflexible, and don't support rapid adaptation to changing business needs. SOA-based application development and integration solves many of these problems.

SOA services are implemented on standards-

based technologies. Most communication middleware systems, such as RPC, CORBA, DCOM, EJB, and RMI, rely on publish, describe and discovery patterns similar to SOA. None of these implementations are perfect; issues exist with interoperability as well as with defining acceptable standards. SOA attempts to eliminate these weaknesses. For example, each middleware system has a fixed granularity: functions for RPC, objects for CORBA, and so on. Services, however, can be defined as functions, objects, applications, or other things. This makes SOA adaptable to any existing system, and does not force the system to conform to any particular level of granularity.

SOA also helps information systems move toward a “leave-and-layer” architecture, meaning that instead of altering existing systems to provide a standards-based services interface, the applications and systems are wrapped with a service interface layer, transforming them into agile services without changing existing source code. SOA covers not only information from packaged applications, custom applications and legacy systems, but also the functionality and data from IT infrastructure such as security, content management, search, and so on. SOA-based applications are faster to build because they can reuse functionality from these infrastructure services.

### Best Practices

An SOA is conceptually simple, and its value is evident, but implementing SOA solutions within a distributed enterprise can still be difficult. Building the right architecture and adopting the following best practices can ease the transition, and help ensure short-term and long-term success.

### Coupling: Tight, Loose, or Decoupled

Coupling refers to the relationship between two services – how much each one knows about the other's location and implementa-

tion. For example, how much does a service consumer know about how to find and invoke a service? How is the service provider implemented? Tight coupling can create better performance, but can cause maintenance problems (for example, if a service provider is moved to a new server, its consumers will need to be updated). Versioning can also create coupling problems between services.

- In loose coupling, a service provider defines and publishes its service interface using a standard definition language. The interface defines the invocation contract between a service consumer and a service provider. This allows the service provider's implementation to change as needed without impacting the rest of the system, as long as its interface remains the same.
- If a service consumer “knows” the location of a service provider, this introduces location dependency or coupling between the two. An intermediate loose coupling of location is desirable. Loose coupling of location can be achieved by using service intermediaries such as service brokers or directory services.

### Binding: Static, Brokered, or Dynamic

Service binding is the connection between two services, and the definition of how they interact – whether one calls the other directly or through an intermediary. Obviously, decisions about service binding have consequences for performance, flexibility, and maintenance.

- Static binding assumes that the service definition and interface do not change frequently. Static binding between service consumer and service provider tightly couples both participants of the service invocation.
- In broker binding, a service consumer sends its request to a service broker, which routes the request to one of the service providers that have published interfaces with it. The service consumer does not need to know where the provider is or how it is implemented.

*Continued on page seven*

---

## **sponsor profile: BEA SYSTEMS, INC.**

*Continued from page six*

- Dynamic binding assumes that the consumer calls the provider directly. It is also assumed that the provider's service definition and interface change frequently, so for every call the service consumer must contact a service directory to request the service definition. Based on the returned information, the consumer binds to the service provider. As dynamic binding performs a lookup and then a binding, it will not perform as well as static binding.

### **Granularity: Fine or Coarse**

A fine-grained service accepts a small amount of data (native data types or objects) and accomplishes one or a few tasks at a time. A coarse-grained service accepts a document and can implement an entire business transaction at once. Fine-grained services require more service calls but allows closer control of activity; coarse-grained services can provide better performance and a higher-level view of operations.

### **Invocation: Synchronous or Asynchronous**

SOA supports two models of service invocation, synchronous (RPC) and asynchronous (document). The choice of synchronous or asynchronous service calls depends on the availability and performance capabilities of the service provider, and on the consumers' needs.

- Use synchronous service calls when an immediate response is required. The service consumer blocks while waiting for the response.
- In the asynchronous model, consumers send requests and continue with other processing. The service provider responds when it has completed the service; the elapsed time depends on the server load.
- In most composite services, numerous applications will be involved. It is almost impossible to guarantee request/response times between many applications using synchronous service calls. In those cases, asynchronous publish/subscribe or point-to-point messaging model guarantees delivery of

messages and responses between multiple applications.

- The asynchronous service invocation model is best suited for highly reliable, coarse-grained, document-oriented services. Synchronous service invocation is more suited for fine-grained, lightweight service calls.

### **Shared or Common Services**

SOA promotes software reuse, division of development and operational logic and tasks, and policy-based computing. These characteristics of SOA can be achieved by designing services for reuse and by externalizing operational policies.

- Find services that are useful to more than one application and publish them. Promoting reuse and avoiding duplication depend upon sharing knowledge of the available services, and upon encouraging reuse within the organization.
- Reusable services must be implemented carefully. Don't embed application-specific policies such as security (authentication, authorization), SLA, QoS, and audit. Since policies are common across applications, policies should be configured and applied outside of the application.

### **Organizational Best Practices**

- Get business buy-in.
- Establish an SOA Center of Excellence (COE), staffed with cross-functional architects and business analysts with strong technical, communication and business expertise. The COE:
  - Enforces governance for reuse, standards, and IT policies.
  - Fosters the business-technical feedback loop.
  - Publishes design principles, guidelines, best practices, patterns, and templates.
  - Centralizes architecture and standards for federated implementation and management.
  - Promotes Service-Oriented Development for Applications (SODA).
  - Manages assets, publishes services, and communicate across groups.
- Incrementally develop and deploy SOA-based solutions while incrementally developing the shared service infrastructure.

- Fund shared services infrastructure, remembering that ROI is realized long-term not short-term. SOA is a strategic solution that can also solve tactical problems. Business units share the infrastructure and leverage common investments.
- Plan for shared infrastructure cost recovery, metering and charging for services.
- Start with data services, and plan to encapsulate legacy systems as services.
- Use a business service perspective for selecting and implementing coarse-grained services. Business processes with high maintenance and operational costs are ideal candidates for the benefits of SOA.
- Plan for any necessary IT training; the network-centric, policy-based, distributed nature of SOA-based applications requires IT groups to understand the administrative and support differences between traditional applications and SOA-based applications.

### **Summary**

A Service Oriented Architecture can provide many benefits to an organization – reusable, platform-independent business services, standards-based development, and the ability to make changes quickly when necessary to keep up with the speed of business. Most of the challenges inherent in implementing an SOA are organizational rather than technical, and can be minimized by following the best practices recommended here. There are situations in which SOA's pluses do not come into play – with homogeneous application environments, stand-alone applications, or short-lived applications, for example – but for many enterprise application integration environments, SOA delivers a clear advantage.

---

*For more information, please contact [SOA@bea.com](mailto:SOA@bea.com) <<mailto:SOA@bea.com>> BEA Systems, Inc. (Nasdaq:BEAS) is the world's leading application infrastructure software company, providing the enterprise software foundation for more than 13,500 customers around the world, including the majority of the Fortune Global 500. BEA and its WebLogic® brand are among the most trusted names in business. Headquartered in San Jose, CA, BEA has 81 offices in 34 countries and is on the Web at [www.bea.com](http://www.bea.com) <<http://www.bea.com>>.*



## Noël's product management corner – MEMBER SUCCESS STORY

# CIGNEX – a New Twist on an Old Business

**R**aj Setty, the dynamic President and CEO of CIGNEX Technologies, Inc., is bubbling over with great ideas for remaking the software services business. And he is having a good deal of success in the process. He says that believing in a goal is essential to accomplishing it. He should know. He wrote his first novel at the age of nine and proceeded to pitch it to over two hundred publishers until it was finally published (“by a quality publisher”) four years later.

After living and working in five different countries in Europe and Asia, Raj came to Silicon Valley on a dare. Someone told him that he ought to be in the Valley “where new ideas get realized.” In 2000, he started CIGNEX with five co-founders. The company has been profitable ever since. Having managed professional services organizations for several years, Raj mined his experience for the lessons that he used to build CIGNEX, a truly different professional services firm.

### First He Asks, “Why?”

CIGNEX holds strategy in high regard. Raj begins each project working with clients to discover what they’re trying to accomplish prior to any talk about applications and implementation. In this way, CIGNEX aligns with its clients - whom Raj calls “his partners” - to develop solutions that improve a company’s top and bottom-lines. This creates a win-win-win for the client, for CIGNEX, and, as often is the case with early-stage companies, for the investors. Because CIGNEX’s solutions generate cost savings and a substantial return on investment (rather than appearing as a cost), CIGNEX is able to win big projects without competing exclusively on price. CIGNEX doesn’t get compared to other outsourcing vendors. That’s not how Raj wants to be seen. He

and CIGNEX are strategic partners with their clients as far as Raj is concerned.

### CIGNEX’s Thriving Ecosystem

How does CIGNEX promote and sustain this ROI-based business? CIGNEX is a company branching out in many directions, but remains focused on the Internet and web-based applications. From the very beginning, the founders created the “CIGNEX Ecosystem,” a well-crafted business model that has resulted in a potent combination of services, supporting solutions, innovation, and new businesses. The professional services arm (PSO) is CIGNEX’s primary revenue generator and its core business. The PSO includes web application strategy and devel-

**And what is the CIGNEX corporate aspiration?**

**“That innovation will bring great things and CIGNEX will build many companies that do cool things.”**

opment; outsourced, high-quality, local support; and custom product development. Supporting solutions are core technology and solutions that are packaged for reuse on projects for multiple (non-competing) clients. These supporting solutions quickly evolve based on insight CIGNEX gains on projects and feedback from clients as they test the new solutions in everyday use.

As for innovation, Raj’s latest brainchild, CIGNEX Labs, uses prior project experience as a launch pad for entirely novel products, solutions, and frameworks. These, in turn, enhance CIGNEX’s service capabilities. For example, the company created KeepShort ([www.KeepShort.com](http://www.KeepShort.com)), a URL-shortening technology and service now exploding on the Internet scene. It resulted from Raj’s negative user experience with too-long URLs generated by client catalogs and doc-

ument-management systems. CIGNEX Labs is modeled after a similar concept used by a famous predecessor from whom Raj learned a thing or two -- Thomas Edison’s famous Menlo Park, NJ, “factory for good ideas.”

And how do new businesses fit into the ecosystem? Well, CIGNEX looks for and buys Internet properties that allow the company to field test innovations as well as generate new client referrals using the “powered by CIGNEX” model. Thus the ecosystem – a structure that feeds on itself with all roads leading back to a stronger core services business.

### Encouraging New Ideas

The ecosystem is supported by a strong corporate culture that encourages people to have new ideas and speak up. It started with the co-founders, five people all with very different ideas and all asking a lot of questions. Questions take time, but they also encourage innovation and are at the core of developing new technologies. At CIGNEX they focus on overlaying personal aspirations with CIGNEX corporate aspirations. And what is the CIGNEX corporate aspiration? “That innovation will bring great things and CIGNEX will build many companies that do cool things.”

The secret to success? You might start by following Raj’s advice – “Dream big dreams – no constraints.”

---

*Noël Adams, President, Phase Forward – [www.phaseforward.net](http://www.phaseforward.net). Phase Forward is a product management and marketing firm in San Francisco that handles projects along the product lifecycle from new product research and market analysis to outbound product marketing.*



# Debt Is Good: Technology Lenders Seek Opportunities to Facilitate Growth

In the 1997 film, “Wall Street,” Michael Douglas, playing the character of super-broker Gordon Gekko, instructs neophyte wheeler dealers that, “greed is good.” So, in that same spirit, but perhaps without quite the same panache, I’m happy to say that, “debt is good.”

I’m not speaking of personal credit card debt, nor of the national debt, but of debt financing obtained by technology companies. Debt is sometimes perceived as a negative, but nothing could be farther from the truth for young, growing enterprises. And debt can be a particularly powerful tool in today’s business environment, which is beginning to show signs of emerging from its recent slumber.

## **Debt Versus Equity Financing**

The due diligence completed by venture capitalists and debt finance providers is somewhat similar; both are concerned with a company’s management team, market potential, execution to plan and path to profitability. But, there are differences. VCs, for example, place a greater emphasis on a company’s market value, since they stand to earn the highest returns by investing in companies with low valuations and high financial upsides.

Those of us who deal in debt, find market value less important. For very young companies, we are more interested in the quality and commitment of their VCs, because often part of our repayment comes from future equity rounds. As companies mature, our concern shifts to their ability to generate revenue, since they will be more dependent on their own operations to ensure they can repay their loans.

During the recent downturn, VCs and debt finance providers both got hurt. And it was for the same reason. The unpre-

dictability of the market led to funds—equity and debt—being provided to companies based on unreal projections. Since debt providers are directly paid back by the companies to which they lend (while VCs recoup their investments based on the company’s actual performance), the well-documented troubles some companies had in meeting their obligations with debtors led to that form of financing being eschewed by many.

## **The Conditions Are Right**

When the market was at its most unpredictable, it was impossible to prepare forecasts that had much weight behind them. As a result, that was not a good time to take on debt. To use a personal finance analogy, you probably wouldn’t decide to buy a new car if you were uncertain about the stability of your job.

On the flip side, if you’d just landed a new job, with perhaps a significant salary increase, you certainly would be comfortable making a new car purchase. In fact, you might see adding to your credit portfolio as a good thing, since you would be building up your credit-worthiness. The scenario is much the same for technology companies; it would be foolhardy for them to take on debt during unpredictable times, but smart to do so when the economy is healthier and the future less cloudy. And that is where we are today.

While equity money typically goes toward R&D expenditures and to fund losses, debt is used to finance growth. Eventually, not having debt is likely to be a negative at any company, for its flexibility would be sorely affected. Today, as we cycle back into a more promising economy, is a great time for companies to add debt to their arsenal of growth strategies.

We’re seeing a number of signs that the

long-awaited economic turnaround is imminent. Semiconductor fabs are operating at more than 95 percent capacity (up from a low of 60 percent), the commercial real estate market has registered a spurt in activity, and corporate demand for items like enterprise software is coming back. All this leads to greater predictability—noted through such things as order backlogs and customer trials—meaning that companies can be more realistic about the future, and thus afford more debt.

## **Who Provides It?**

The economic downturn did have at least one positive effect for those providing debt financing to technology companies; it weeded out the “pretenders” from the “contenders.” Many financial institutions got out of the tech lending business when the going got tough. That leads to my first suggestion to technology companies seeking debt financing today: make sure you work with an organization that has a commitment to the sector. Here are some other traits to look for:

- A history of dealing with technology companies
  - Strong relationships with top-tier investors
  - The ability to add value with other financial services
  - A dedicated focus on technology lending
- Doing proper due diligence in securing a debt finance provider is every bit as important as going through that process with a VC. Those of us who have experience working with technology companies provide a whole lot more than funding to our clients; we are available to provide counsel as requested, and we are happy to facilitate relationships with other service providers, including VCs.

*Continued on page 11*



## sponsor profile: TRINET

# Smaller Companies Need an HR Outsourcing Provider that Fits their Culture

Outsourcing human resources is tailor-made for the small and medium-sized company. Small business executives, even more than their large-company counterparts, need to retain a laser-like focus on their companies' growth and success by offloading distractions and concentrating on their core business. But despite the potential advantages, many smaller businesses shy away from the opportunity to hand off HR administration to trained experts.

Part of the problem appears to be the murkiness of a crowded vendor landscape, to say nothing of the complexity of human resources itself. If business leaders don't understand the ins and outs of HR, how can they evaluate potential vendors for the purpose of outsourcing?

And yet that's precisely why outsourcing makes sense. Human resources is a function that's complicated, tricky, and dangerous to manage without the assistance of professionals. Payroll requires interfacing with multiple state and federal agencies; healthcare is volatile and constantly layered with new guidelines and regulations. Then there are the vagaries of hiring and terminating in compliance with the law, and building a company environment that helps attract and retain top quality talent.

### **Outsourcing can bring potential time and cost savings as well:**

- According to Cedar Consulting Group, adopters of HR self-service technology have cut the cost of their transactions by as much as 50%.
- According to Mercer Benefits Consulting, outsourcing benefits administration can potentially clamp down on rising benefits costs—resulting in double digit savings for a small business owner over the course of several years.
- Gartner Research found that enterprises

with fewer than 1,000 employees are the predominant users of HR outsourcing services, often because they don't have the depth of specialist resources found in larger enterprises. Smaller organizations usually have more HR generalists than training, benefits, and payroll experts, and often have limited IT resources.

So how should small business executives evaluate and select an HR provider? Several criteria should be taken into account, but they all share a common theme: ensuring that the provider is a good fit with your company's own culture and workforce. Determining the nature of your company's own culture can help you understand which providers are equipped to build and maintain a successful outsourcing relationship with you and your employees.

### **Let's examine some of these factors in more detail.**

1. Payroll is payroll, right? Wrong. If you have a company of "knowledge workers," you need a payroll provider that offers flexibility in terms of bonuses and commissions, which tend to be part and parcel of highly compensated organizations. An HR provider that strictly deals with minimum wage or hourly employees may not have the tools necessary to help you run payrolls that meet your needs.
2. What kind of benefits packages will help you attract and retain the talent you need to carry your company forward? If your employees work primarily in a warehouse, you may need basic medical plans without all the bells and whistles. If your employees are highly skilled, you will need a provider that offers a robust benefits package—a rich suite of plans that a smaller company would have difficulty procuring on its own. These packages should include high-level PPO plans,

flexible spending accounts, 401(k) administration, and optional benefits that cover everything from legal services to pet insurance. Benefits are an important strategic tool for attracting qualified employees, so you should make sure that your package can be leveraged as a competitive advantage in your hiring practices.

3. Make sure your provider has the requisite experience to work with a company in your industry, and therefore is likely to understand your specific needs. For example, a provider that is used to working with venture-backed companies should be experienced in customer lifecycles from initial funding up through IPO. A provider that is used to dealing with retail companies should have the back-end process for managing high turnover and minimum wage employees. Industries such as biotech, financial services, and law may have their own unique requirements.
4. As a corollary, can the provider give you references from customers in your industry? Will they provide contact information?
5. If your company plans to ramp up in the near future, you should ensure that the provider offers a full-fledged HRIS platform, preferably a recognizable brand. The HRIS should be web-enabled if you have employees who are used to receiving services via the Internet, as well as managers who may need authorized access to perform certain high-level HR functions. The best providers will offer online data about its customers—and your own company—that can assist you in making strategic business decisions.

*Continued on page 11*



## volunteer highlight:

# Richard Taylor

An Interview with Barbara Cass, Director of Volunteers



*Richard, you have chaired the Business Intelligence SIG since July 1999 and have recently joined the Executive Council. What have you enjoyed most about your SDForum volunteer experience?*

For me, the Business Intelligence SIG is a journey of exploration. I have worked on developing database systems for 15 years, and for most of that time on database systems for decision support. Running the Business Intelligence allows me to complete my knowledge of what people do with their decision support systems. There are a lot of acronyms like CRM, SCM, ETL and I organize speakers to tell us what those acronyms really mean. Now that I have joined the Executive Council, it will give me an opportunity to explore broader horizons.

*What are your opinions on the impact of business intelligence products on the future of the industry?*

In business the advantage goes to the innovator or the best execution. Business Intelligence is about using information that the enterprise often already has to re-understand the business and innovate, or to improve execution. Currently the large BI software vendors like Business Objects, Hyperion and Cognos are consolidating (all have presented to the BI SIG). At the same time there are new emerging categories such as Business Activity Monitoring (BAM), and Business Process Management (BPM) to keep things interesting.

*What do you do in your "real job"? Education?*

I did an undergraduate degree and then PhD in Computer Science back when computers did not impinge on most peoples lives. I have worked on hardware and software, distributed and parallel, architecture and implementation. After years of working on exotica that never seemed to go anywhere, I shifted focus to database systems to make an honest living.

*What do you like to do in your spare time?*

To get out of the house, I ski and hike or sail. Otherwise, I like making things, everything from building and updating my computer systems to brewing beer and making jam and marmalade from the back yard fruit. A camcorder and movie making software is my latest way of making something.

---

## streetwise: DEBT IS GOOD

*Continued from page nine*

### Don't Delay

As we enter a more robust economic cycle, the time is right for growing technology companies to leverage either their equity financing or their income with complementary debt. Debt providers are anxious to do deals with sound companies that are looking to take the next step in

their development and lack only the capital to make that happen. And, although "debt is good" might be our mantra today, any similarity to Gordon Gekko types ends right there.

---

*Alan Jepsen is Senior Vice President and Managing Director of Comerica Bank's Northern California Technology and Life Sciences Division. He has over 20 years of experience in technology banking.*

---

## sponsor profile: TRINET

*Continued from page ten*

6. Even pricing figures into the cultural fit between your company and the provider. A percentage billing method may be ideal if you don't have a large volume of highly paid employees, but it can work against you if your employees make an average of \$80,000 or higher. If this is the case, you should work to find a provider that offers a flat billing method. The cost difference could be significant.

7. What kind of on-site HR support does that provider offer? Do you have the need for high-level HR guidance such as compensation planning, stock option administration, and determining hiring/terminating practices that are suitable for your industry? Even the proper strategies for funding benefits can vary by business sector, and it's important to find out if your provider has the requisite knowledge base to assist you.

You will also want to perform a variety of other due diligence functions, such as tracking the provider's record on minimizing healthcare costs, its involvement in legal disputes with customers, its carrier for workers' compensation, its record of service fee increases, and its ability to keep pace with changing HR regulations such as HIPAA and COBRA. However, you'll find that most of the questions you ask will relate back to the same point—is this provider a cultural fit?

In the final analysis, it won't be a surprise that a cultural fit between provider and customer is perhaps more of a concern in regards to HR than any other kind of business process outsourcing—because after all, once you get past the administration and paperwork, HR is all about human beings.

---

*Matthew Campbell & Mike Triantos, TriNet Employer Group, 1100 San Leandro Blvd., Ste 300, San Leandro, CA 94577, (888) 874-6388, [www.trinet.com](http://www.trinet.com)*



## SDForum SPECIAL INTEREST GROUPS (SIGs)

### Special Interest Groups (SIGs)

are informal evening meetings held on a monthly basis and organized around a specific business or technical area of interest to software and Internet professionals.

Please always check our website for the latest information before attending a meeting.

There is typically no charge for SDForum members, \$15 for non-members.

**Bioinformatics SIG.** The goal of this SIG is to build a vibrant community of professionals, entrepreneurs, VC's, and companies that share an interest in bioinformatics, to provide monthly meetings at which members can network with each other, and to bring in leaders in the field from industry and academia to speak to the group. Meets on the fourth Tuesday of the month, 6:30 PM at Hanson Bridgett, Marcus, Vlahos, Rudy, LLP, 333 Market St., San Francisco. [biosig@sdforum.org](mailto:biosig@sdforum.org) Contact Chairs: Ramasubbu Venkatesh and Colin Wiel.

**Business Intelligence.** Provides a forum for discussing the growing opportunities software provides to use information to improve business management practices. Meets third Tuesday of the month, 6:30 PM, Palo Alto. Contact Chairs: Paul O'Rorke and Richard Taylor [BISIG@sdforum.org](mailto:BISIG@sdforum.org). **Sponsored by Microsoft and Sun Microsystems.**

**Emerging Technologies.** A forum to discover and discuss the most recent developments in technology, how these technologies affect us, and how we can define business models around these technologies. Meets second Tuesday of the month, 7:00 PM at Cubberley Community Center, 4000 Middlefield Rd., Rm. H-1, Palo Alto, Contact Chairs: Janice Carter and Bill Grosso [etSIG@sdforum.org](mailto:etSIG@sdforum.org). **Sponsored by IBM.**

**Founder's Forum.** Helps new and seasoned entrepreneurs learn from each others experience, enthusiasm, focus and vision. Meets first Tuesday of the month, 6:00 PM at SDForum, San Jose, Contact Chairs: Chris Yeh and Omar Baig, [ffSIG@sdforum.org](mailto:ffSIG@sdforum.org).

**International Software.** This SIG is the international arm of the SDForum, connecting global and technology communities with Silicon Valley. Meets third Monday of the month, 6:30 PM (check web site for location). Contact Chairs: Jeannine Athas and Michael Ede; Email: [IntSIG@sdforum.org](mailto:IntSIG@sdforum.org) **Sponsored by East of England, Localization Industry Standards Association. Food sponsored by Execustaff.**

**Java.** Gives developers a chance to interact with and learn from other Java developers. Presentations cover significant products or technologies of interest. Meets first Tuesday of the month, 6:30 PM at Cubberley Community Center, 4000 Middlefield Rd., Rm. H-1, Palo Alto. Contact Chairs: Paul O'Rorke and Dave Yost [JavaSIG@sdforum.org](mailto:JavaSIG@sdforum.org) **Sponsored by BEA and Sun Microsystems.**

**Marketing.** Success or failure of companies, including technology companies, is often determined by the quality of their marketing. This SIG helps people learn how to better position, brand and promote products and services. Meets on the second Monday of the month, 6:30 PM at the Mitchell Park Community Center, 3800 Middlefield Rd., Palo Alto. Contact Chairs: Jim Schibler and Tammo Stubbe [MtgSIG@sdforum.org](mailto:MtgSIG@sdforum.org)

**Multimodal Interactive (Wireless Media/Voice).** This SIG was created to establish and support a community of software developers interested in creating wireless and voice based web applications. Monthly meetings serve to provide technical insight into the rapidly emerging technologies, as well as to provide an environment in which attendees can network with each other. Meets first Thursday of the month at 6:30 PM at Openwave, 1400 Seaport Blvd., Redwood City. Contact Chairs: Alex Chan and Joe Jasin [WirelessSIG@sdforum.org](mailto:WirelessSIG@sdforum.org) **Sponsored by Microsoft and Sun Microsystems.**

**Security.** Fills the need for developers to get first hand information about security products, technologies, and processes, and to exchange information on current practices and encountered threats. Meets second Wednesday of the month, 6:30 PM at Nokia Internet Communications, 323 Fairchild Dr., Mountain View. Contact Chairs: Ames Cornish and Ira Victor [securitySIG@sdforum.org](mailto:securitySIG@sdforum.org).

**Software Engineering Management.** The Software Engineering Management SIG is a forum for discussing new ways for engineering (principally, software development) managers to improve their effectiveness by providing a deeper understanding of the process, personnel, organizational, and technical aspects of the software development environment in today's economy. Meets second Thursday of the month, 6:00 pm at SDForum Center, 111 West Saint John, Suite 200, San Jose. Contact Chairs: Stephen McHenry and David Brown at [SEMSIG@sdforum.org](mailto:SEMSIG@sdforum.org)

**Venture Finance.** This SIG will help you practice your pitch and presentation and get feedback from VCs and entrepreneurs who have talked the talk and walked the walk. Meets third Wednesday of the month, at Microsoft, 1065 La Avenida, Bldg 1, Mountain View. Contact Chairs: Steven Bennet, Tom Cervantez and Phil Korn. [vfSIG@sdforum.org](mailto:vfSIG@sdforum.org) **Sponsored by PricewaterhouseCoopers, Silicon Valley Bank, TriNet, and White & Lee LLP (NOTE: COST TO ATTEND THIS SIG; \$15 MEMBERS; \$30 NON-MEMBERS).**

**Web Services.** Web Services allow programmers to write code that can be used by other programmers written in any language, on any operating system, running on any hardware platform over the Internet. Mildly put, Web Services represents a revolution in the business model of e-commerce. Meets fourth Tuesday of each month, 6:30 PM at Microsoft, 1065 La Avenida, Bldg 1, Mountain View. Contact Chairs: Frank Cohen and David Nielsen [wssvSIG@sdforum.org](mailto:wssvSIG@sdforum.org) **Sponsored by BEA Systems, eBay Developers Program, IBM, Microsoft, PayPal Developer Network, Raining Data, and Sun Microsystems.**

**Windows.** An open forum for collecting and disseminating technical information on programming Microsoft Windows. Technical panels, presentations by experts, and previews of new development tools by company representatives all teach the latest Windows technology. Meets first Wednesday of the month, 6:30 PM at Cubberley Community Center. Contact Chairs: Chuck Berg, David Korn [WinSIG@sdforum.org](mailto:WinSIG@sdforum.org) **Sponsored by Microsoft.**

# CALENDAR – SIGs ONLY

For all SDForum event listings, including SIGs, please visit our website calendar weekly.

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	
<b>Jun04</b>	<b>1</b> Java SIG, 6:30 pm, Cubberley Community Center, Palo Alto  Founders Forum, 6:00 pm, SDForum Center, San Jose  Open Source SIG, 6:30 pm, Belmont Conference Center, Belmont	<b>2</b> Windows SIG, 6:30 pm, Cubberley Community Center, Palo Alto	<b>3</b> Multimodal Interactive SIG – No meeting this month.	
	<b>7</b>	<b>8</b> Emerging Tech SIG, 7:00 pm, Cubberley Community Center, Palo Alto	<b>9</b> Career and Professional Development Series, 6:30 pm, Cubberley Community Center, Palo Alto  Delphi Working Group, 7:00 pm, Petaluma	
	<b>14</b> Marketing SIG, 6:30 pm, Mitchell Park Community Center, Palo Alto	<b>15</b> Business Intelligence SIG, 6:30 pm, Lucie Stern Community Center, Palo Alto	<b>16</b> Venture Finance SIG, 6:30 pm, Microsoft, Mountain View	<b>17</b>
<b>21</b> International SIG, 6:30 pm, (check web site for location)	<b>22</b> Web Services SIG, 6:30 pm, Microsoft, Mountain View  Bioinformatics SIG, 6:30 pm, Hanson Bridgett, San Francisco	<b>23</b> Security SIG, 6:30 pm, Cubberley Community Center, Palo Alto	<b>24</b>	
<b>Jul04</b>	<b>5</b>	<b>6</b> Java SIG, 6:30 pm, Cubberley Community Center, Palo Alto  Founders Forum, 6:00 pm, SDForum Center, San Jose  Open Source SIG, 6:30 pm, Belmont Conference Center, Belmont	<b>7</b> Windows SIG, 6:30 pm, Cubberley Community Center, Palo Alto	<b>1</b> Multimodal Interactive SIG, 6:30 pm, Openwave, Redwood City
	<b>12</b> Marketing SIG, 6:30 pm, Location TBA	<b>13</b> Emerging Tech SIG, 7:00 pm, Cubberley Community Center, Palo Alto	<b>14</b> Delphi Working Group, 7:00 pm, Petaluma  Software Architecture and Modeling SIG, 6:30 pm, Cubberley Community Center, Palo Alto	<b>8</b> Software Engineering Management SIG, 6:00 pm, SDForum, San Jose
	<b>19</b> International SIG, 6:30 pm, (check web site for location)	<b>20</b> Business Intelligence SIG, 6:30 pm, Cubberley Community Center, Palo Alto	<b>21</b> Venture Finance SIG, 6:30 pm, Microsoft, Mountain View	<b>15</b>
	<b>26</b>	<b>27</b> Web Services SIG, 6:30 pm, Microsoft, Mountain View  Bioinformatics SIG, 6:30 pm, Hanson Bridgett, San Francisco	<b>28</b> Security SIG, 6:30 pm, Cubberley Community Center, Palo Alto  Joint meeting with SofTech (A Panel on RFID) 6:00 pm, AutoDesk, San Rafael	<b>22</b>
				<b>29</b>



## event highlights

### ■ Summer Showcase 2004 : The Place to Network and Display Ideas

SDForum's Showcase event features 12-16 emerging software and Internet companies who are given the opportunity to display their products and ideas in an "expo" style setting as they showcase their exciting concepts to the public. Following an afternoon of private screening by potential investors and a company pitch session, the public is invited to come network with professionals in the technology industry and get a glimpse at these exciting new concepts. Don't miss your chance to network and get connected with more than 200 professionals in the technology industry.

**Location:** SDForum Center - San Jose  
**Date:** Thursday, June 3, 5:00-8:00 PM  
**Cost:** \$15 SDForum and ANZA Members\*; \$25 Non-Members \*at the door add an additional \$10 to member and non-member prices

To register by phone please call 408-494-8378 or visit [www.sdforum.org](http://www.sdforum.org) \*ANZA Members - please phone 408-494-8306 to register for this event at a discount.

### ■ Wireless West Summit: A California Mobility Seminar and Expo

Innovating for the Future: California Wireless Companies meet Silicon Valley Mobile Software Developers

This program will focus on real world solutions, highlighting results from actual companies that have been implemented in successful mobile application projects. Participants will hear from speakers around several categories of wireless including Business-to-Business, Personal Productivity, Business to Consumer, Access, and PIM. Presentations will include discussions of the hot topics on everyone's minds - how standards are both helping and hindering mobility and it's progress; how wireless can simplify integration tasks "in the field"; what the 2003 and 2004 prospects are for the enterprise-wide uses; and what is being done about security concerns. Highlighting the reality of these issues, a panel of CXOs from leading companies in a variety of industries will engage in interactive Q&A about how they managed their mobile-beta and full implementations. Throughout the program sponsors will showcase the latest tools and trends in the industry.

**Event Chair:** Joe Jasin, Founding Partner, Wireless Blueprint

**Date:** Thursday, June 10, 2:30pm-8:30pm  
**Cost:** \$35 SDForum Members; \$45 Non-Members \*at the door add an additional \$10 to member and non-member prices  
To register by phone call 408-494-8378 or visit [www.sdforum.org](http://www.sdforum.org)

### ■ The SDForum Distinguished Speaker Series with Jerry Fiddler: Envisioning the Connected World

**Presenter:** Jerry Fiddler: Founder and Member of the Board - Wind River

In the not-too-distant future, the majority of electronic devices will be connected via the Internet or wireless protocols, bringing convenience and simplicity to daily living, but adding layers of technology and complexity to devices we use everyday. Jerry Fiddler will offer a glimpse to his vision of the future, "The Connected World." He will discuss how this "world system" will evolve through the convergence of multiple technologies resulting in one, giant interoperable system. The audience will learn that the road to the connected world is wide open, and that today marks the beginning of a new era in the embedded industry.

Jerry Fiddler is founder and member of the board of Wind River. Since its establishment in 1981 in a Berkeley garage, Wind River has grown to become the leading provider of embedded software worldwide. Fiddler sits on several corporate boards, including Tensilica, Axis, Crossbow and Nanochip, as well as a number of advisory and non-profit boards. He has worked actively both with students and in an advisory capacity at a number of universities, including University of California, Berkeley, Wharton, and University of Illinois. He was also a member of the first NRC national study of networked embedded systems. He received a BA in music and photography, and an MS in computer science, both from University of Illinois.

**Agenda:**  
6:00-7:00pm Registration/Networking & Light Snacks  
7:00-9:00pm Program

**Location:** PARC-George E. Pake Auditorium, 3333 Coyote Hill Road, Palo Alto  
**Date:** Thursday, June 17, 7:00-9:00pm  
**Cost:** \$10 SDForum and Co-Hosting Organizations (Computer History Museum, CSPA, and ACM San Francisco Bay Area Chapter) \$20 Non-members  
\*at the door add an additional \$10 to member and non-member prices  
To register by phone, call (408) 494-8378 or visit [www.sdforum.org](http://www.sdforum.org)

### ■ Coaching Session with NEA: Meet with Stewart Alsop, Scott Sandell, and Harry Weller.

SDForum is hosting a unique series of one-on-one executive coaching meetings with Partners from NEA. These meetings are designed to help founders and CEO's of early and late companies identify partnerships, provide industry insight and perspective, and help with tactical ideas and contacts.

Three partners from NEA- Stewart Alsop, Scott Sandell, and Harry Weller - are looking to have an interactive conversation with 5-10 companies. This is not perceived as a funding exercise, more a discussion session that promises to be a good use of your time.

If you are an entrepreneur with an idea or a CEO of an early or later stage company, please submit a one-page summary of your business for selection.

**To apply:** Contact [laura@sdforum.org](mailto:laura@sdforum.org)  
Open to SDForum Members only.

**Location:** SDForum Center, 111 West Saint John, Suite 200, San Jose, CA  
**Date:** Tuesday, June 15 2004, 9:00am-1:00pm  
**Cost:** FREE to SDForum Members

### ■ Scrum Certification Workshop with Ken Schwaber

SDForum is proud to host Ken Schwaber and his ScrumMaster certification workshop at SDForum Headquarters July 19-20. Scrum is an agile, lightweight process that can be used to manage and control software and product development using iterative, incremental practices. Wrapping existing engineering practices, including Extreme Programming and RUP, Scrum generates the benefits of agile development with the advantages of simple implementation. Scrum significantly increases productivity and reduces time to benefits while facilitating adaptive, empirical systems development. In this two-day workshop participants learn:

- How to maximize customer ROI with Scrum
- How to remove barriers between development and customer, allowing the customer to directly drive development
- Improve team productivity, creativity, and empowerment
- Improve Engineering practices and tools  
Deliver working software every 30 days

*Continued on page 23*



# “Negotiations Are Not a Game”

Newsweek stated, “Effective negotiations are the game of life.” Moreover, many people think of negotiation as a kind of game—sometimes even a “zero sum” game—in which there are winners and losers, and you have to outwit your opponent.

Negotiations may involve game-like elements, but thinking of negotiation as a “game” amounts to a serious oversimplification. For one thing, in negotiation, there are no rules, and everyone can be a winner.

Negotiations are a combination of science and art. Unlike engineering, in negotiation there is never a perfect solution, but there may be an optimal one. The best business negotiators understand that there is a methodology to being a great negotiator and that there are ways to improve a “deal” so that all parties involved come out ahead.

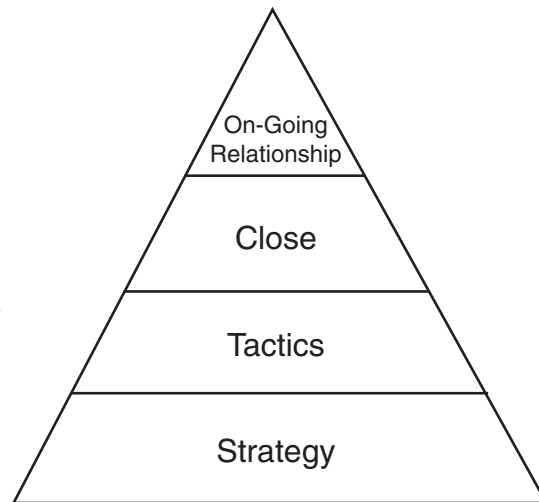
On a daily basis, executives must negotiate. At every stage in the life cycle of a company, all the executives, whether in engineering, marketing, finance, or sales, get involved in negotiations that affect their companies’ success.

Great negotiations take time, effort, understanding and planning. It is helpful if the executive team works from a common negotiation model in planning and creating a “deal.” Alliance-Strategies, Inc. has developed a simple model for executive teams to use in preparing for and discussing the negotiating process. The model is depicted by an equilateral triangle divided into four sections of approximately equal size by three horizontal lines (see figure). The triangle is labeled as follows:

These are the four phases of the business negotiator’s process. Each phase builds upon the previous phase, although negotiations do not always proceed along a linear path, and different phases can be revisited at any time during the process.

## The Strategy Phase

Strategy should be the first phase of any negotiation, and determining strategy begins before the initial meeting of the parties. Many inexperienced negotiators come to the table too early, before they have established their negotiating strategy. Creating a negotiations strategy means outlining the goals; constraints (everyone has some); the risk-reward scenario; anticipated length of the relationship; likely impact on the company’s products, offerings, and revenues; composition of the



negotiation team; a strategy for gathering essential information; and finally, each parties’ sources of power.

Each party in a negotiation brings something that the other party desires. For example, venture capitalists have money, experience investing in start-ups, and the expertise to develop a business. Entrepreneurs bring ideas, technology, teams, and perhaps market knowledge, potential customers, a network of potential employees, and their commitment to the negotiating table. Consequently, each party comes to the table with some amount of power. However, power is not the only, or even the most important, success factor in a negotiation. Other ele-

ments are frequently as important or more important—elements like information and experience. Negotiators also need another absolutely critical element, and that is . . . TIME!

Time allows you to gain all the other elements for success—including power. Time spent preparing for a negotiation is literally the best investment you can make. With time, you can implement “Tim’s Rule of Three.” According to Tim’s Rule of Three, you should always have discussions with three real potential partners simultaneously. This enables you to discover and discuss numerous options. It gives you flexibility, and if necessary, the “walk away” power you need, if one of your potential allies proves to be inflexible or too demanding.

## The Tactics Phase

In the second phase of a negotiation process, tactics are determined as participants get to know each other during early exploratory meetings. This is a good time for asking open-ended questions and carefully listening to and documenting the responses for review later. Find out as soon as you can who will lead the negotiations for the other party, and whether they will take a zero sum or win-win position. It is important to find out what organizational pressures are operating on the other party, and the nature of their timeframe expectations.

Once foundational information is gathered, you are ready to outline the tactics you will employ. There is a wide spectrum of initial tactics you could consider, ranging from “good person/bad person” to common time tactics; from decoy to “funny money.” Many times the tactics will vary as the negotiations either progress or bog down. If negotiations stall, two tactics that may be considered

*Continued on page 22*



# Critical Path In Project Management

In recent decades, formal project management (PM) processes have been introduced into more organizations - with varying degrees of success. PM practices were refined and introduced into business with the nexus of emerging systems theory and systems engineering after the Second World War. Military, governmental agencies and construction enterprises were early and successful adopters of formal PM processes.

Two PM and Systems Engineering (SE) techniques, developed in response to the emergence of these complex technological systems, address the challenges of scheduling, coordinating tasks and estimating projects - Program Evaluation and Review Technique (PERT), developed and used in the Polaris Weapon System, and the Critical Path Method (CPM).

Recall that the generally accepted 'project' definition is a temporary work effort to complete a unique objective within defined time duration, with a limited or defined budget and resource constraints (Project Management Institute, Harold Kerzner). The conflicting forces on a project are often depicted as three sides of a triangle (Quality, Time & Budget/Resources). Changing any one or two will necessarily change one or both of the others.

## Programs and Projects

Programs, while similar to projects, are distinct in that programs are not temporary, with unique deliverables and budget boundaries. Programs may evolve out of projects and typically involve repeating processes, such as manufacturing. Also, a program might be a process to manage unique projects. Clearly, the boundaries, vocabulary and distinction between the two can be problematic, especially when project or program capability maturity levels are low. Modern enterprises can be

faced with executing multiple simultaneous, or partially sequential projects, with limited resources spread across all the projects. At this level, Project Management Offices (PMO) and Project Portfolio Management (PPM) are appropriate, or perhaps the newly popular Critical Chain Project Management. Of course, managing multiple projects is more complex and demanding and it's doubtful the performing organization will manage multiple projects well if incapable of managing single projects successfully.

## PM Building Stones

While sound PM rests on too many principles to cover here, we will consider those immediately relevant to the CPM and to the overall management of the project. Assuming for discussion that scope and requirements are clear, the CPM relevant steps are: (1) a Work Breakdown Structure (WBS) – decomposing, organizing and segregating out work activities into distinct measurable and manageable steps; (2) estimation of duration of the decomposed distinct and measurable work activities; and (3), scheduling of the work activities in consideration of their dependencies and durations into the overall project schedule. A distinct activity's scope (and consequently its duration) is logically and organizationally appropriate to and proportional to the nature of the overall project. This helps to assure the individual 'work packages' can be well managed and so any performance problems with an individual work activity are surfaced in time for corrective action.

## Critical Path Method

Taher Khorakiwala, in "Next Generation Project Management" [SDForum News V.7, #1, Feb/Mar 2004], correctly points out that CPM is best suited for single projects rather than multiple projects with

shared resources. No one can deny that project portfolio management is necessary to manage constrained resources across multiple simultaneous projects. But, CPM is hardly the fault for resource allocation problems in project portfolio management.

CPM is not meant as a premium methodology for estimating discrete work activities, or multiple project resource allocation, but for managing an overall project schedule and performance. Improving work activity duration estimates for improved overall project duration estimation in CPM (where a task duration is estimated in a single value) has long been addressed by techniques such as Monte Carlo simulation, PERT (most optimistic + 4x most likely + most pessimistic) / 6), historical data (see Watts Humphrey's Capability Maturity Model), analogous estimating or better expert judgment. Blaming the difficulty in allocating and leveling resources across the portfolio on CPM that is using faulty activity duration estimates is akin to blaming the saw or measuring tape for a carpenter's failure to measure and cut correctly or the saw's failure to drive a nail when being used incorrectly, rather than a hammer. Or worse yet, this is like claiming algebra is outdated and useless since we have calculus! We don't want to throw out the baby with the bath water by discounting CPM's merits because we plug in poor estimates. Heuristics for resource constrained scheduling for simultaneous multiple project execution with shared resources, for example, will assign scarce resources to critical path activities first and improve estimating individual project task activities.

Khorakiwala asserts that projects are "always late, over budget and under scope" - which is just a little too sweeping for me, having in fact run projects on-time, on-budget and in-scope by using disciplined PM methodologies that minimize performance inhibition from resource leveling or theory of

*Continued on page seventeen*

---

## streetwise: PROJECT MANAGEMENT

*Continued from page 16*

constraints. A well-done work breakdown structure, good duration estimates, project schedule (CPM), communications, teamwork, adequate resource management and project controls, such as earned value analysis, go a long way toward project success.

Khorakiwala seems to fault the CPM task or work package float, as added safety time padded in by resources in their estimates. Sure, resources may add their own cushion hidden within their work element estimate (which should normally be left along if within some historical or best estimate bounds). But slack in CPM network diagram is a product of task dependencies and task durations, not errors of duration estimation (though there could be poor estimating), very useful, not a hindrance, see Example 1, below. Recalling the linkage between systems engineering and project management, we know that our slack is useful anyway to allow for irregular and unplanned flows and a °

It's critical in project portfolio management that duration estimation and scheduling is coordinated at the performing level of work execution rather than being dictated from a centralized higher-level management level.

### The Critical Path

#### *Example 1.*

The example project network diagram schedule, shown above in Figure 1, has task durations on the lines before the (completed) task node, and for simplicity assumes preceding tasks must be completed before following tasks are started. The diagram is depicted differently when this is not the case. Path (A), Start-1-5-Finish will take 5 weeks; Path (B), Start-1-4-Finish will take 2 weeks; Path (C), Start-2-4-Finish will take 2 weeks. Path (D), Start-3-6-Finish will take 3 weeks. Notice, too, that 1 and 2 must be com-

pleted before 4 is started and start of tasks 4 and 5 are dependent on task 1's completion.

Measuring the total times of each path, we see path (B) Start-1-5-Finish is the critical path. With a duration 5 weeks, it's the longest path with the least flexibility or slack. Any delay along this path will delay the overall project finish. All the other paths have some slack in them, in that there could be some delays along the path without necessarily delaying the overall project.

The network schedule diagram is strength of CPM. By showing the task dependencies and durations, we can control project execution. Tasks can be performed in parallel as long as all of their necessary preceding tasks are completed. Tasks Start to 1, 2 and 3 can all be done as soon as we start. Or, start of task 3 could be delayed a week without affecting the overall project completion (all other things being equal).

The critical path, then, is the path(s) with the least flexibility (as the aggregate measure of steps on the path), honoring scheduling dependencies, though the project network diagram schedule of steps. Late tasks on the critical path will delay the project completion (unless the time is made up in subsequent steps), but longer than estimated durations in steps off the critical path may, but will not necessarily affect the overall project schedule.

Further, that a project schedule can be fast tracked is a conscious choice to speed up completion, and increase project risk, by paralleling what was originally sequentially ordered tasks (such as starting Task 5 before Task 1 is completed). This is completely independent of and not a 'fault' of CPM's network schedule and critical path determinations. Alternatively, one might focus on the critical path and 'crash' the project by applying additional resources to speed up steps on critical path, again dependent on knowing the critical path. Lastly, it's simply an inherent property of any project plan or system that changing any one part (a activity duration) may affect everything else (the overall project duration). Of course, the classical reference here is that we can't fast track the drying of a concrete foundation before the wood floors are added or begin painting the final color

before the primer has dried, either of which would be shown in the critical path of a CPM schedule network diagram. No fast track, crash or chain of any sort will change that.

---

*Michael Ayres is a Project Management Consultant, doing business as Mace and Associates, speaker and trainer who specializes in helping organizations make better IT decisions and complete IT projects successfully, with an emphasis on Earned Value Project Management. He has a Master's Degree in Systems Management and is a certified Systems Analyst from UC Berkeley Extension and a certified Project Management Professional® (PMP) with the Project Management Institute. He welcomes feedback or questions and can be reached at Michaela@att.net or for more information go to <http://michaela.home.att.net>.*



## GET THE WORD OUT!

**Here are two ways  
you can get your word  
out in SDForum News:**

### 1. Advertising\*

- 1/2 page (member) \$300
- 1/2 page (non-mem) \$450
- 1/3 page (member) \$200
- 1/3 page (non-mem) \$350
- 1/6 page (member) \$125
- 1/6 page (non-mem) \$275

### 2. Bulletin Board Listing [Members only]

- Cost is \$25

*\*(companies over 100 employees  
please call for rate)*

**Please call Barbara Cass  
at SDForum: 408/494-8314**



## ■ **Java Testing and Design: From Unit Testing to Automated Web Tests**

by Frank Cohen Prentice Hall 2004 (ISBN 0131421891)

**Recommendation Level: Highly Recommended.**

What does it mean to test your software product or the software application that implements your web site? As this book's title suggests there are several steps along the way. The author provides excellent and comprehensive coverage of what it takes to test modern-day web applications and web services for compliance with customer expectations, functionality, speed and reliability.

The book briefly looks back at the history of software development and testing from mainframe applications used by only a few users, through desktop applications, client/server to today's applications using a web browser for interacting with humans and web services to interact with other systems. The eight steps of the Internet Software Development Lifecycle are described as:

1. Specify the program from a mock-up of a web site
2. Write the software
3. Unit test the application
4. Fix problems found in unit test
5. Internal employees test the application
6. Fix the problems found
7. Publish the software to the Internet
8. Rapidly add minor bug fixes to live servers.

A number of testing methods are described to perform testing of Internet software including click-stream, unit, functional, scalability/performance and quality-of-service (QoS) testing. Use of test agents that model typical goal-directed activities of users are an important technique to help with the functional through QoS methods. Multiple user "archetypes" should be defined to cover the different types of users that will be hitting your system.

Archetypes are not to be confused with the different user roles defined for the various use cases of your system. Archetypes are different

types of users acting in the same role, but with different goals and styles of behavior. For example, a user ordering on a web site may browse and fill up a shopping cart and then delete items during checkout. Another user may search for just a few items and purchase them. Still another person may take a long time to check out with purchases.

Intelligent test agents are similar to clever testing people. They capture the expected behavior of each archetype. Agents have the advantage of being automated and run concurrently.

To measure testing results, a Web-Enabled Application Points System (WAPS) is defined in terms of three types of errors and weaknesses that are detected by human testing, test agents or actual system use:

Criteria	Description	Points (every 24 hours)
Functions	Number of wrong states, boundary errors and privilege problems.	1 point for every log entry showing functional errors.
Performance	Number of seconds to deliver dynamic web pages.	2 points for every page that took more than 10 seconds to compile.
Failures	Number of failure occurrences in which a user sees an error message.	3 points when the web-enabled application failed.

Using this approach a score can be computed from analyzing the system log files under different load conditions.

In addition to analytical approaches to measure system performance, the author explores the various perspectives of employee within the software product company responsible for software quality: developers, QA and IT Managers. Each has traditionally used different tools to measure system performance.

The author combines these various tools and techniques into a toolbox of open source items including his own TestMaker software. Use of TestMaker is covered in the book as a framework for creating test agents for testing both human and web services interfaces to applications. More

information and the software itself can be freely downloaded from the author's web-site [www.PushToTest.com](http://www.PushToTest.com).

Most discussions of testing Internet applications focuses on automated testing of the user interface. This book does an excellent job of creating a comprehensive view of web-based software testing from unit testing by developers, to functional testing by QA engineers, to load testing by IT managers. In addition, real world testing tools and code examples are provided in both Java and .NET C#. I recommend this book both for managers wanting an overview and QA engineers wanting to implement an effective QA process.

## ■ **Beyond Software Architecture: Creating and Sustaining Winning Solution**

by Luke Hohmann Addison-Wesley 2003 (ISBN 0201775948)

**Recommendation Level: Highly Recommended.**

The single biggest mistake I see software companies making is putting too much emphasis on technology and ignoring important business issues. The most successful companies are good in both areas.

It is easy to find books that describe the technical details of writing software. Similarly, business books abound that deal with strategies for winning customers and

*Continued on page 19*

---

## book and software reviews

*Continued from page 18*

making profits with a software company. This book marries the two subjects. It covers just about all issues that affect software product architecture from both technical and marketing perspectives.

The author describes software product architecture as focused on the "big picture" of how your product is structured. He states that architecture goes "beyond" the typical collection of software modules and subsystems. He says, "The structure of the team and the structure of the system are inevitably intertwined."

But beyond people and technology, the author does a tremendous job of covering other topics that are critical to the software product development process. Topics include business model and licensing, deployment, integration, usability, portability, security and release management - all issues that impact the success of a software product but are often handled as last minute afterthoughts.

For example, the author includes a chapter on business and license models that goes beyond software traditional licensing and its enforcement. Modern day web-based systems can use pay-per-use, subscriptions and/or transaction fees. These choices can have a significant impact on the system architecture.

This book is especially valuable if you are new to software product development. For me, the book confirms the importance of the issues mentioned in the previous paragraphs, issues seemingly peripheral to software development.

The book describes the product management role and tasks that must be performed in conjunction with and parallel to writing the software. These include the requirements gathering phase, managing the Alpha and Beta releases with customers and the product launch activities. The author uses excellent examples from his own professional experience that illustrate the touch points between engineering and marketing. Here's an example:

"I've found a very strong correlation

between a product development team in trouble and a product with ineffective or nonexistent positioning. Positioning isn't just about creating a future for your customers. To be effective, it must be about creating a compelling future for everyone, including the development team."

The nice thing about this book is it covers these marketing tasks in the context of the technical tasks of programming more familiar to developers. Just as product architecture intertwines team and system structure, the book shows true product development occurs when both technical and marketing tasks are intertwined.

People often ask me what American programmers will do if all their jobs are outsourced offshore. This book contains a good description of the kinds of jobs they can do. It describes the other tasks necessary to develop a software product, some of which cannot be outsourced away from the customers and end-users.

### Your reviewer: Steve Mezak

*Steve Mezak is a veteran Silicon Valley software development entrepreneur with a long and strong track record in successful distributed software development, including outsourcing. Leveraging 25 years of computer system development, Steve founded multiple software startups and had very successful exits for two. He founded Accelerance to provide risk-free outsourcing (both on and offshore) delivering dramatic cost and time savings to clients. [www.Accelerance.com](http://www.Accelerance.com)*

**LinkedIn**  
*Your network is bigger than you think*

### ■ Put your SDForum network to work for you with the SDForum Group on LinkedIn!

Now you can use LinkedIn to leverage the power of your SDForum network. Find and reach the new business contacts you need, through special features available to SDForum Members only. To find out more, please visit: [www.sdforum.org/LinkedIn](http://www.sdforum.org/LinkedIn)

---

## sponsor profile: JETRO

*Continued from page four*

### Online Game Services Inc.

([http://www.solid.ad.jp/corporate/index\\_e.html](http://www.solid.ad.jp/corporate/index_e.html))

Online Game Services Inc. is a subsidiary of Solid Networks Inc., a leading provider of Internet services in Japan since 1996. Initially specializing in the development, operation and maintenance of Internet server systems, the company now has over 7,000 corporate clients using its hosting service. Since 1999, the company has focused on becoming a 'Game Service Provider,' developing services dedicated to the running of online games, specifically Massively Multiplayer Online Games (MMOG) for game developers and publishers. Online Game Services, Inc. was recently incorporated in the United States to develop its overseas business and to act as a gateway to Asian markets for U.S. game companies. The company is also moving into other areas that utilize its core competencies, including software on demand and the sale and support of MMOG middleware.

These companies are all actively looking for synergistic partners in the U.S. to create mutually advantageous business opportunities. If you would like to contact them to explore possible options, please call the U.S.-Japan Business Incubation Center at 408-387-1330 or go directly to their individual web sites.

---

*Blaine Carman, Managing Director,  
U.S.-Japan Business Incubation Center*



## event review: BUSINESS INTELLIGENCE SIG

# Providing Decision Support to Product Lifecycle Management

In January, **Dr. Krish Mantripragada**, Director Product Management for Agile Software ([www.agile.com](http://www.agile.com)) spoke to the Business Intelligence SIG.

Competitive need for tight, efficient product lifecycle management has made using product related information very important. There is constant pressure at every stage of a product lifecycle to insure strategic business decisions. Is the right product being built? Are you able to deal with changes in your supply network? Can you respond effectively to customer and product quality issues?

Product Lifecycle Management (PLM) analytics drive profits, accelerate innovation, reduce costs, and ensure regulatory compliance. PLM analytics can capture and utilize information that is normally distributed across many systems including data from CRM, ERP, SCM and out-sourced systems.

### Benefits of PLM Analytics

Some of the many benefits of PLM analytics include:

- Optimizing a product portfolio.
- Reducing product costs.
- Improving product quality and compliance.
- Collecting globally distributed data into one framework.

### Product Portfolio Management

Continual innovation is key to all growth companies. The ability to identify the winners and losers in a product line, and to quantify what sells, when, where and why, can impact a company's competitive edge. The ability to rank and score projects on multi-criteria, track key metrics

and running "what- if" scenarios also gives an edge on key portfolio decisions. There are few companies without growing product diversity; the ability to identify potential resource conflicts; and the ability to analyze historical information which can drive future investments.

### Cost Management

PLM analytics help to optimize resources through schedule and budget management, as well as allocating and sequencing use of resources throughout the life of a product. With seventy-five percent of product costs determined in the early design phase, analytics assist in early identification of in-house or outsourced resource needs helping to reduce both cost and time.

Production costs are tied to a company's supply chain often limiting choices and scheduling. The lack of visibility in product related data, and lack of ability to quantify impact within a global supply network means analytics can help define continuous management of component and commodity costs, down to the assembly level. Analytics can assist in redefining and quantifying sourcing strategies, thus raising leverage in supplier relations.

### Compliance and Quality Management

Product failure is a big issue that is not identified fast enough in many companies. One of the goals of PLM analytics is to improve an organization's speed of quality resolution, and catching first time quality issues. It can drive quality into the design process, and using multi-dimensional analysis can trace product data during

quality analysis, analyzing defects, and reviewing historical data. The use of corrective action metrics can help to streamline responses, and warranty and recall costs can be reduced.

Regulatory compliance is also growing in importance. The liabilities for compliance are expected to have a huge impact on product cost. The challenges of tracing material composition used by suppliers, or tracking every configurable part of a product can be made manageable through PLM analytics, by taking the huge amount of distributed data and integrating it into one understandable framework.

### Globally Distributed Data

One of the biggest challenges in PLM is dealing with product information that is created in globally distributed information systems. Design specifications, manufacturing data, supply chain data, ERP, CRM, SCM can now be collected with real-time connectivity, and one source for reporting. Providing operational reporting, model simulation, multi-dimensional analysis and scenario analysis covers both business and technology processes. It can provide product development and model simulation to understand market demand conditions and identify appropriate launch channels for new products.

### Two Popular Solutions

The tools most used in the many suites of Agile Software PLM analytic applications are multi-dimensional analysis and scenario analysis.

*Continued on page 22*



## The Next Big Thing

**B**ill Coleman is CEO of Cassatt Corporation. He was one of the founding members and CEO of BEA, the fastest-growing software firm ever to exceed \$1 billion in annual revenue. Before that, Mr. Coleman held executive and manager positions at Sun Microsystems, Dest Systems, VisiCorp, and GTE Sylvania. He holds M.S. degrees in Computer Science and Computer Engineering from Stanford University.

Bill Coleman's talk on "The Next Big Thing" was refreshing. The first thing he did was set realistic expectations. He did not try to tell us what specific gadget or service would be in demand in the next few years but rather the framework he uses to determine trends in technology. He was very emphatic that anyone who tries to predict the future or what will be "The Next Big Thing" will inevitably have some things wrong, including himself! He walked us through the model he uses to predict trends in technology to show us where we are now, where we had been and where we will go in the future. Coleman started the talk by explaining how technology is applied.

### How is technology applied?

Coleman explained that technology is applied to do two things:

1. Increase productivity
2. Increase value

Coleman defined productivity as getting more results while inputting less. For example, as employees become more efficient in their jobs, they can handle more responsibility and be more productive. Value was defined as getting enough benefit to justify the cost. In the above example, the employees become valuable once they produced results that exceeded the costs associated with their employment. In order to accomplish increased produc-

tivity and increased value, innovation is necessary. All revolutions are based on innovation. Coleman explored the revolutions that brought us to where we are today. Innovation has historically been broken down into revolutions. The three revolutions are:

- Agricultural
- Industrial
- Information

What are the phases of every revolution?

Coleman explained that the revolution has 2 phases: invention and exploitation. For example, in the beginning of the information age, the spreadsheet was invented. The expectation was that the budgeting process in companies would go from 3 months to 3 days. This was definitely a possibility given the robustness of the technology. Unfortunately, the spreadsheet initially replaced the adding machine and the typewriter, so, the creation of the spreadsheet meant that more modeling and more financial scenarios could be examined. This did not increase productivity or the value of the work. The spreadsheet merely allowed the end user to create more outcomes without expediting the budgeting process. Eventually the spreadsheet would be exploited to expedite the budgeting process.

So there are two definite phases in each revolution that must happen before we go on to the next revolution. If you have a great invention but are unable to exploit it, then the invention is worthless.

### Push Vs Pull Model

Coleman states that one must exploit the invention in order to succeed and there are two models that do just that, the push model and the pull model.

#### Push Model

Dell and Wal-Mart are perfect examples of push models. They make or distribute

products and push them to end consumers who use them. Mass production is an example of how the push model has helped these two companies change the business models for their industries. The change in commerce created capitalism from mass production. The idea behind mass production is that products are made in mass quantity, ordered in mass quantity and, hopefully, the money made will also be in mass quantities; however, there is a huge cash outlay, which is how we get to "capital"ism.

Both Dell and Wal-Mart use mass production by taking information and exploiting it to become leaders in their industries. Dell uses information to create a computer in seven days in what had previously taken a month. In addition, Dell streamlined the process so that they lead the industry and set "best practices" standards. Wal-Mart uses information to stock stores according to each region's needs as opposed to a "one size fits all" approach for every store in every region. Wal-Mart's business agility helps them keep abreast of local market desires and fulfill those needs. Both Dell and Wal-Mart have information that others in their industry have but they exploited this information to increase productivity and increase the value of their operations. Dell and Wal-Mart are examples of how companies have changed industry standards using their business agility and using the push model.

#### Pull Model

On the other hand, eBay, Google and Amazon are examples of companies that have also changed their industries. They use the pull method since they make no assumptions as to how the end user will use their product. All three of these companies enable the end user to get the desired information and then use that information as needed. For example, someone wanting to search for "Silicon Valley" using Google can

*Continued on page 23*

---

## streetwise: NEGOTIATIONS

*Continued from page 15*

are the “change” tactic and the “walk away” tactic. The change tactic can be as simple as changing the location of the negotiations or as complex as bringing in a new lead negotiator. The “walk away” tactic is one way of drawing a line in the sand to show the other party that you have gone as far as you can go. There are risks to all tactics and one should not “test” a tactic without understanding the potential consequences.

### **The Close Phase**

At this point, the negotiations teams have hopefully listened to each other and worked together to create a desirable deal for all parties. The negotiations teams must now position the deal for the close. They might test to see if they can close through a commonly used technique called the “trial close,” in which you verbally play out a scenario and see if you can come to final agreement.

Once the deal has been defined, the party that drafts the LOI (Letter of Intent) gains the final advantage. This should be one of your goals.

LOIs do not have to be legal documents. If the parties trust each other and want to work together in a flexible manner, the LOI may be the final document. This decision will have legal implications, however, and parties should consult legal counsel before making any final decisions on the form of any agreement.

### **The Ongoing Relationship Phase**

Next comes the celebration and possible announcement of the “deal.” It is important to understand that the signed “deal” is only the beginning of the relationship. The most difficult phase of the negotiation process is ensuring that the relationship works for both parties in an ongoing way. If a deal favors one party too much, there is a high likelihood that the other party will come to feel “injured” and seek to “get even” in some way. This alone is a good reason to work toward “win-win” outcomes in negotiations.

Nevertheless, no matter how hard the

teams have worked to put together a “fair” deal, the world will change and with it the on-going relationship between the parties. Therefore, it is critical to the ultimate success of the “deal” for the parties to continue to communicate, work together flexibly to insure their mutual success, and protect their individual IP.

This brief article outlines a model that executive teams can use to discuss and implement the various phases of a negotiation process. It provides a simple framework for executives to use in working with their negotiation teams to create deals that produce a great return on investment.

---

*Thomas "Tim" Bailey, Jr., CMC is President of Alliance-Strategies, Inc., a management consulting firm specializing in all facets of creating successful strategic alliances, joint ventures, mergers, and acquisitions. Tim's commitment is to providing his clients with great returns on their investments (ROI). He is the President emeritus of the SDForum Executive Council and was previously a member of the Board of Directors. He can be reached at [Tim@Alliance-Strategies.com](mailto:Tim@Alliance-Strategies.com)*

---

## event review: BUSINESS INTELLIGENCE SIG

*Continued from page 20*

### **Multi-dimensional Analytics**

Multi-dimensional analysis identifies trends, business drivers, historical data, and ability to forecast. With product structures usually being ragged hierarchies of data, multi-dimensional analysis brings order to chaos. It has the ability to drill-down complex data tree structures, extracting data, stage schemes, and provide visualization tools.

Multi-dimensional analysis can use rule-based evaluations to set threshold criteria and to fix analysis at any level of product structure. Custom roll-up's can identify specific analysis utilizing Pareto analysis, and other quality assurance indicators.

### **Scenario Analytics**

The ability to use scenario analysis can be key in strategic decision-making. Interactive “what if” dynamic engines can compare and contrast impacts on task sequencing, labor resources, suppliers, and multiple budget allocations. Decisions on timing and product choices can be imperative to keep the competitive edge.

### **Agile Software's PLM's Solution**

The Agile PLM Analytic Platform offers a solid integration framework, real time connectivity, and multidimensional analytics with configurable visualization (Cognos or other vendor), as well as, their own dynamic Scenario engine. Their engine includes templates to help in configuration, utilizing each company's unique data needs.

While emphasis has been on manufacturing and definition, with PLM management of multiple levels and systems of information, all of Agile's multidimensional analytic models can be applied to other business areas. Agile understands PLM information structure needs, and system integration, so they are confident in their solution in meeting today's PLM management's analytic needs.

---

*Written by Alysyan Pohlmeier, BI/PM Consultant "Bringing information systems in-line with strategic business objectives." You can contact her at [alypohl@california.com](mailto:alypohl@california.com)*

---

## event review: THE NEXT BIG THING

*Continued from page 21*

use the words he or she selects. There are no strict guidelines that dictate how the search should be done or in what sequence. The resulting data can be used however that person sees fit, which is the basis of the pull model. The company makes no assumptions how the product will be used. The important thing that eBay, Google and Amazon do is that they make the transaction seamless. You never see the warehouse where the books are stored, or the infrastructure that eBay uses. The operations behind the transaction are invisible to the end user.

### Where are we now in the Information Age?

Now what? Coleman said that we are now in the exploitation phase of the Information Age. When we were in the discovery phase we gathered information but we were not necessarily more efficient. Again, he uses the spreadsheet as an example of how its creation was not initially more efficient but actually made things worse! Instead of budget managers submitting budgets faster, the new spreadsheets allowed them to do even more analyses, which made the process even longer and more onerous. Eventually, we would see the true value of the spreadsheet and it would become one of the “killer apps” we know today. We are now trying to exploit other applications in the Information Age and will continue to do so until the next revolution.

### What are the past and future “Killer Apps?”

Some of the past “killer apps” have been the spreadsheet, the web and email. All of these tools increased productivity and brought value to the end user.

The new “killer apps” will be dynamic software architecture to extract policy and process workflow. Coleman gives a great example of dynamic architecture. He explains how MCI was able to steal many

of AT&T’s customers simply because AT&T could not change their billing system quickly enough to compete with MCI. AT&T’s billing system was so archaic that they could not respond in a timely manner to MCI’s “Friends and Family” program. In order for a company to compete in the marketplace, it will have to be dynamic and the benefits of changing a system should exceed the costs associated with switching.

Coleman expects the exploitation of the Information Age to continue to build out until 2020 with an emphasis on security and distribution. This will enable the software industry to continue to thrive.

### The Next Big Thing!

Coleman concluded with what he thought would be the next revolution: The Material revolution! There will be a convergence of nanobio and information. We are starting to invent in this area but we are at the very early stages and are nowhere near the exploitive stage. He does not expect anything substantial in nanobio and information until 2020, when the information age will be finished building out.

Coleman’s talk was enjoyable because he did not make any predictions on specific technology that would be used but instead gave us insight into future technological trends. The talk was a refreshing change from others who make grand claims with certainty about “The Next Big Thing” only to be never heard from again. We will definitely be hearing from Bill Coleman again!

---

*Dustin Weeks is the Founder of ForeSight Consulting, an investor relations firm which assists private and public companies in positioning to appropriate investors and developing investor strategies. With over 15 years of experience in finance, her experience spans from the United States to Europe. She can be reached at: Dustin@ForeSightConsult.com, www.ForeSightConsult.com or at 650-314-0202.*

*The talk was co-hosted by the Computer History Museum, CSPA, ACM San Francisco Bay Area Chapter and the UC Berkeley Haas Alumni network, South Bay Chapter.*

---

## event highlights:

*Continued from page 14*

Upon successful completion of the program, each participant receives an individual license and copy of the Scrum methodology, Scrum training materials, and Scrum software. For more information and registration, visit <http://www.controlchaos.com>.

**Dates:** July 19-20, 2004

**Location:** SDForum- 111 West Saint John Street, Suite 200, San Jose, CA 95113

**Cost:** \$600 - non-members, \$540 - members

### ■ Agile Summit

Although we have developed software for over 60 years, software vendors and IT departments alike are still unable to deliver products with predictable outcomes and costs. According to the 2003 Standish Group CHAOS report, software development success rates have increased to a whopping 34%. Standish estimated total waste at \$55 billion. There are tremendous opportunities for improvement in the way we manage the development of software.

Today like never before the pressure is on to do more with less. At the same, existing processes remain bureaucratic and impede success. The Agile Alliance has introduced several new promising ways of software development under the banner of “Agile Software development.” The major methodologies include Extreme Programming (XP), Scrum, Crystal Methods, Lean Development, Dynamic System Development Method, Feature Driven Development, and Adaptive Software Development. The core philosophy of these methodologies is to create a software development environment that embraces change, customer collaboration, and quality.

SDForum spotlights Agile Software Development. At the Agile Summit, you will learn:

- How to maximize customer ROI with Scrum
- The fundamental concepts behind Agile
- How Agile methodologies improve software project success
- How Agile methodologies compare to each other
- How IT organizations have evaluated Agile and how it might fit into your organization
- Agile development trends

**Dates:** July 21, 2004

Registration 8:00am, Program 8:30am-1:30pm

**Location:** PARC

**Cost:** \$25 members, \$35 non-members, \*at the door add an additional \$10.

**DATED MATERIAL — PLEASE RUSH**

---

## bulletin board

*This column is offered as a service for Software Development Forum members only. Listings should be 50 words or less. Cost is \$25 (make check payable to Software Development Forum). Payment must be included with announcement. We do not bill for these ads — you must send your check. Send before deadline to: Bulletin Board Ads, 111 West Saint John, Suite 200, San Jose, CA 95113. For information, call 408-494-8314 or send an email to [barbara@sdforum.org](mailto:barbara@sdforum.org). Deadline for the Aug/Sept issue is June 15, 2004.*

**RISK-FREE OUTSOURCING.** Concerned about: IP protection, finding a competent offshore team, or reliable on-time & on-budget delivery? For a limited time, SDForum members get two completely free special reports addressing these important issues at [www.Accelerance.com/sdf](http://www.Accelerance.com/sdf). Discover the secrets of risk-free outsourcing. Contact Steve Mezak, CEO of Accelerance, Inc. 650-941-2920.

**NEED HELP DEFINING, LAUNCHING OR MARKETING YOUR SOFTWARE PRODUCTS?** The 280 Group provides high-quality Marketing and Product Management services to help companies bring breakthrough new products to market and quickly generate revenue momentum. Visit [www.280group.com](http://www.280group.com) or call Brian Lawley at 408-832-1119 for more details.

**WE DO WINDOWS, INTERNET,** and a whole lot more! You have programming needs for dotNet, C/C++, Visual Basic, Java, Web technologies, DBMS, Access, telephony, installers, or mentoring? We have solutions. WinMac Consulting, since Windows version 1.04. Call us at 408-985-2875 or visit [www.ewinmac.com](http://www.ewinmac.com); you'll be glad you did.



Find SDForum past issues  
on our website:  
[http://www.sdforum.org/  
resources/newsletter](http://www.sdforum.org/resources/newsletter)

# SDForum

## MEMBERSHIPS & PRICING

### ANNUAL MEMBERSHIP DUES:

*Includes subscription to SDForum News*

**Individual (1 year): \$99**

**Individual (3 months): \$35**

**Start-up 3: \$250**

*(annual benefits for 3 people)*

**Start-up 5: \$400**

*(annual benefits for 5 people)*

**Company 10: \$750**

*(annual benefits for 10 people)*

**Student: \$45**

**Passport: \$105-\$145**

**Corporate Memberships**

*(available upon request)*



**TO JOIN: Visit**  
[www.sdforum.org](http://www.sdforum.org)  
or call 408/494-8378