

A Sun Microsystems White Paper

**THE SUPERCHANNEL INITIATIVE
FOR THE INSURANCE INDUSTRY**

**LEVERAGING CONNECTIVITY TO DRIVE MORE BUSINESS
AT LESS COST.**

JANUARY 2002

I. Introduction

This White Paper introduces SuperChannel, Sun Microsystems' new initiative for the insurance industry. It speaks to the historical role of information technology in the insurance industry, how current market forces are driving changes in the way the industry is approaching such technology, and describes how SuperChannel addresses the challenges faced by insurance providers today, explaining its value, and providing detail about its structure and technology. Specific sections include:

Back to the Future-

providing a historical context for IT within the insurance industry, as well as a detailed explanation of how current developments are shaping the way insurance enterprises will incorporate IT into ongoing business operations.

The SuperChannel Value Proposition-

detailing the value SuperChannel offers to insurance companies, their partners, and their customers, as well as why Sun is a logical choice for insurance providers looking to improve their IT systems and strategies.

The SuperChannel Technical Architecture-

detailing the elements that comprise the SuperChannel architecture.

The Integratable Stack and Solution Sets-

explaining how Sun's vision of the integratable stack is a perfect fit for the insurance industry, and how it empowers solution sets that enable companies to build specific, flexible, best-of-breed systems that don't require them to be locked into any particular vendor but allow them to leverage their current legacy applications.-

Two for the Show-

identifying leading insurance companies who have begun to implement elements of the SuperChannel solution, with detailed case histories of two implementations: Northwestern Mutual and MetLife.

II. Back to the Future

If you were asked to name an industry whose embrace of information technology was leading edge, chances are good you'd exhaust quite a few choices before the insurance industry would come to mind. While this is understandable in the light of recent history, the fact is that the insurance industry was the first to move en masse to high tech solutions with its broadscale incorporation of mainframe computers more than three decades ago. Even today, the insurance industry remains as one of the largest installed bases of mainframes.

But since the industry is somewhat risk-averse by nature, it hasn't evolved nearly as quickly as other vertical markets since that initial leap into computing; and the fact is that much of the industry is still hanging on to decades' worth of what software providers call "old code," old because of the current age of the programmers who did the initial writing, as well as the age of the applications themselves.

In the interim, insurance companies have patched and glued together the remaining pieces of these existing applications in order to utilize it as newer systems have come online. The resulting communications have been anything but seamless.

Over the past three to five years, a number of forces have coalesced to drive the insurance industry's need to develop its IT resources more rapidly. Key among them is the consolidation of the financial services industry.

The consolidation of the financial services industry.

Banks, brokerages, and insurance companies no longer exist as discrete entities-one can buy insurance from a bank, or stocks and bonds from an insurance company. This has been going on globally for quite some time, but has only moved forward vigorously in the United States since the effective repeal of restrictions imposed by the Glass-Steagall act of 1934. The Gramm-Leach-Bliley

Act of 1999 was the legislative straw that broke the back of what many saw as a camel in an age of jets, doing so by strongly facilitating financial sector combinations and regulatory change.

Consolidation does several things:

- 1) It brings additional and new products to current and new channels, either through mergers and acquisitions or through internal changes in response to the expanded opportunities an acquisition may bring.

- 2) It makes connectivity a more important enterprise issue. As new acquisitions come on line, how do you combine disparate systems? Which redundant systems will be eliminated? How do you eliminate process redundancies across new organizational structures? And how do you provide access to (and maximize utilization of) enterprise assets?

If you look at financial services, the primary value to the customer is service and knowledge. In this intensely competitive environment, rapid execution is more than a growing requirement-it's a necessity, expected and demanded by customers who are becoming accustomed to Internet speed.

Financial services organizations have responded to this dynamic by focusing on driving down the cost of services. They do this by leveraging technology to provide service in real-time, and in a manner that makes it simple for their personnel, partners, and customers to do business.

What does this mean to insurance companies who now have to compete with banks and brokerage services?

It means they're involved in a turf war, a battle hugely influenced by technology. The battle cry of this war is "Automate! Take out human intervention!" The cry knows no boundaries-it is made universally-and therefore IT activity from front office to back office, and everywhere in between, has increased significantly. All parties to the competition are investing in areas that drive the top line first, the bottom line next, and then in areas that develop the

rest of their institutions.

The kinds of questions being asked include:

- What do I do that would allow users (i.e., agents, brokers, vendors, or individual customers) to be happier with me as their partner-and therefore buy more from me?

- How do I do this in the face of declining margins on my profits and services?

As products and services become commodities, the market demands that their price be driven down. *Technology is the driver.* The process of driving down costs typically focuses on these elements:

1) Optimizing the channel.

Businesses have typically thought in terms of multiple channels to market. In the insurance industry these include agents, brokers, direct business, e-commerce, etc. However, the ability of information technology to provide front to back, end-to-end connection will ultimately create a SuperChannel, enabling the organization to manage critical communications with greater speed, accuracy, and control than heretofore imagined. This drives down costs significantly and creates competitive advantages. While no insurance company has yet completed an implementation where all the elements of a SuperChannel have been put in place, pieces are being implemented successfully by industry leaders (see Section IV) and it is only a matter of time before whole SuperChannel structures are built. The new nature of competition in the industry will require this, and those companies seeking leadership will do well to remember the industry's leap into mainframes, looking back to that boldness as a means of charting a course of action for the future.

2) Bringing additional, newer products to market in shorter timeframes.

Nothing marks today's commerce as clearly as the accelerating pace of change, which is increasingly driven by rising customer demands. The phenomenon of mass customization is crossing every market, with companies expected to quickly provide products and services tailored to the detailed, specific demands of individual customers. In the Internet Age, consumers want what they want, when they want it, where they want it. If one company can't provide this, they can be assured that another will. Added to the changing array of resources, relationships, products, and services wrought by consolidation, this means also be created and sold ever faster, as newer products and services are being created ever faster behind them. Responsiveness and flexibility take on new and critical roles in this new economy.

3) Streamlining of internal processes and functions.

Once channels have been optimized-once the move towards the SuperChannel is started-companies must look even more closely at internal functions and processes as a means to further increase efficiencies and drive down costs. (Claims processing, a major challenge in the property and casualty business, is a perfect example. A company paying a claim on a \$500 watch may have systems in place that incur hundreds of dollars in costs to process that claim. Such inefficiencies must be corrected for companies to operate profitably.)

4) Risk mitigation.

In an age of accelerating change, insurance companies must be assured that their business plans are addressing the genuine risks they face in today's dynamic environment. As a company's business systems and processes change, risk must be accounted for before such changes are implemented, and, as such, risk mitigation is an increasing piece of product choice and delivery.

With these elements in mind, companies must ask themselves:

- How do I take back-end data so that I can look at that information securely from the front-end?

- And how do I intelligently promote to the consumer looking in from the front-end?

For insurance companies, this means giving its channel partners the means of accessing intelligence about the consumer so that products can be cross-sold or up-sold, or new products introduced at the right time. If a consumer has had a child since he or she last communicated with the company, a host of new products and services should rise to the fore as potential sales to the company- and potential value to the consumer. And an agent should be able to identify these opportunities across their entire book of business so they can rapidly respond to them with appropriate solutions.

From a systems perspective, this means putting intelligence to work and getting legacy stovepipes (within the existing enterprise, as well as within any newly acquired or merged elements of the enterprise) to talk to each other.

This is what SuperChannel does-it takes everything in the system, wraps it around the latest and greatest technology available, then leverages the SuperChannel to accomplish top to bottom, end-to-end connectivity for greatest optimization. The value it delivers to the organization and its customers is considerable.

III. The SuperChannel Value Proposition

Clearly, a number of factors have converged rapidly to literally reshape the insurance industry, and in doing so they have redefined the challenges that insurance providers face in today's intense and rapidly changing competition. The principal drivers of this development include:

1) The networked marketplace

The triumph of the Internet and explosive implementation of Web-based technologies is dramatically changing the nature of all commercial enterprise; certainly it has changed the insurance business. The most sweeping economic and social development since the Industrial Revolution, the Internet Revolution has altered demands for everyone involved in the insurance sector-buyers, brokers, vendors, and providers throughout the supply and demand chain. In this dynamic environment, the focus of competition has moved beyond the insurance enterprise to a broader insurance value chain. This has forced providers to look within and outside of their organizations at the changing array of networks that affect both demand for products and services, as well as the resources used to meet that demand.

2) Dramatically increased competition

Barriers to competition are disappearing. Competition never before imagined pops up overnight. Business relationships are more fluid and less defined, as competitors can quickly become one's strategic partner, or become more formidable through merger or acquisition. In this environment, information systems that empower fast, efficient response to change are not an option. They are a necessity to meet demands being driven by the changing roles of insurance providers, the changing requirements of customers, the need for lower-cost operations, and legal requirements for documentation, security, and transaction fulfillment.

3) *Channel proliferation*

The integration of new technologies has resulted in a plethora of choice for insurance buyers. Traditional channels to market (e.g., brokers) have not been disintermediated, as many analysts originally thought would happen, but rather have taken on new forms to complement their old ones, as purchasing options proliferate in an effort to keep pace with increasing customer demands. In this diffracted environment, management of both channel partners and customer relationships is more demanding, as is retention of loyalties. Customer demand for process involvement also makes the commoditization of insurance products more problematic, as customization has become a requirement for virtually all customers.

Welcome to the new, more demanding world of insurance. In this changed competitive landscape, insurance providers must deliver the optimum product or service to the right customer at the right time, and in the most efficient manner possible. A tough task, to be sure; but one with tremendous rewards when achieved.

Sun's SuperChannel initiative empowers insurance providers to achieve superior levels of customer relationship management by delivering to their agents and policyholders what they want, when they want it, where they want it. For insurance companies, it meets the drivers of industry change directly.

By leveraging cross-platform technologies to access all information on customers, regardless of department or line of business, SuperChannel makes information available through any channel-to any place, at any time, to any device. The benefits include:

- Greater customer satisfaction - leading to higher retention levels

- Lower operating and marketing costs

- Improved profitability

- Reduced product-to-market cycles

- Better cross-selling capabilities

- Increased market share-greater capture of customer base

- Greater share of mind among brokers increasing the amount of business sold through them

- Faster, more cost-efficient transactions

SuperChannel delivers these benefits by providing specific solutions to the most pressing problems facing insurance providers in today's volatile marketplace.

**ENTERPRISE PROBLEMS
PROBLEMS**

ENTERPRISE PROBLEMS	SUPERCHANNEL SOLUTIONS	BOTTOM-LINE BENEFITS
<ul style="list-style-type: none"> • Industry consolidation • Legacy system integration 	<ul style="list-style-type: none"> • iPlanet software combined with Sun Services • Portal server and iPlanet integration server, directory server, and Web server • Combination of the above 	<ul style="list-style-type: none"> • Web-based processing drives down costs, increases access to information, and improves policyholder satisfaction. • Existing enterprise IT assets are better leveraged.
<ul style="list-style-type: none"> • Demand for increasing customization of what has traditionally been commoditized product 	<ul style="list-style-type: none"> • SuperChannel portal server provides customized service to each individual policyholder or agent. • CSRs are given a unified client view with complete information about the policyholder- allowing customization to fit each individual customer. 	<ul style="list-style-type: none"> • Enhanced personal service for each policyholder or agent, increasing customer loyalty and improving retention. • Better opportunity for cross-selling and up-selling via customized approach- at higher margins • Simplified ability to assure compliance with regulations
<ul style="list-style-type: none"> • Increased complexity due to multiple product lines 	<ul style="list-style-type: none"> • Integration server connects all systems- and presents information with a single look and feel. 	<ul style="list-style-type: none"> • Significantly improved data accuracy • Fewer manual interventions, less

	<ul style="list-style-type: none"> •-Workflow engine automates processes and delivers the right data at the right time to the right recipient. 	<p>redundancy, single entry, faster processing, lower costs</p>
<ul style="list-style-type: none"> •-Poor or no integration between disparate enterprise systems 	<ul style="list-style-type: none"> •Integration server connects systems seamlessly, presenting all data with a unified look and feel. •-Workflow engine automates processes and delivering the right data at the right time to the right recipient. 	<ul style="list-style-type: none"> •Better leveraging of enterprise assets •Improved accuracy, fewer errors •Faster processing •-Reduced labor and overhead
<ul style="list-style-type: none"> •-Increased competition via "virtual insurance companies" with lower overhead or larger carriers with better scale and lower overhead 	<ul style="list-style-type: none"> •iPlanet software combined with Sun Services •Portal server and iPlanet integration server, directory server, and Web server •-Combination of the above 	<ul style="list-style-type: none"> •Leverages technology to extend channel approaches and develop new revenue streams for traditional enterprises •Web-based processing drives down costs, increases access to information, and improves policyholder satisfaction. •Existing enterprise IT assets are better leveraged.
<ul style="list-style-type: none"> •-Increasingly smaller windows-to-market 	<ul style="list-style-type: none"> •iPlanet software combined with Sun Services •Portal server and iPlanet 	<ul style="list-style-type: none"> •Improves process efficiencies and collaborative communications within

	<p>integration server, directory server, and Web server</p> <ul style="list-style-type: none"> •Combination of the above 	<p>the enterprise to drive down development cycle times</p> <ul style="list-style-type: none"> •Leverages the Web to communicate about new products and services extends reach while cutting costs •Integrates product information across multiple systems permitting faster and smarter product decisions
<ul style="list-style-type: none"> •Policy administration and claims are slow. •Transaction costs are high. 	<ul style="list-style-type: none"> •Hands-off electronic straight through processing works with existing legacy systems. 	<ul style="list-style-type: none"> •Increases speed of claims and underwriting processes •Minimizes manual processing and intervention •Drives down costs significantly through self service of routine transactions.
<ul style="list-style-type: none"> •Poor customer targeting due to lack of information about customer 	<ul style="list-style-type: none"> •Unified client view delivers comprehensive information about policyholder, allowing better targeting and customization of products for each individual customer while assuring compliance with 	<ul style="list-style-type: none"> •Higher ROI on marketing dollars •Improved market share- better penetration of the customer base •More opportunities for up-

insurance regulations.

selling or cross-selling
of products with greater
margins

- Simplified ability to
assure compliance with
regulations

Why Sun?

Sun is uniquely positioned to meet the needs of insurance organizations as they make the transition to digital processes for channel and customer relationship management.

As insurance is inherently information and transaction intensive, Web-based systems afford a highly attractive solution to organizations looking to move from paper-based to digital processes. No one has a stronger presence in this area than Sun.

- Over 70% of Web servers and 59% of application servers are based on Sun systems and technologies.

- 75% of the top 20 ISP/ASP providers are built on Sun.

Sun's Open Network Environment (SunONE) provides the framework for this dominant position. SunONE comprises our standards-based software vision, architecture, platform, and expertise for building and deploying services on demand. It provides a highly scalable, robust foundation for traditional software applications, as well as current Web-based applications-while establishing the foundation for next generation distributed computing models.

Building on the SunONE platform delivers exceptional value to the insurance provider, integrating channel and customer relationship management processes into their IT operations:

- SunONE is open and integratable, ensuring interoperability with legacy systems, and building in flexibility for the future via open standards and technology. For the insurance executive considering IT investments, building on SunONE extends the time in which returns may be gained from those investments. SunONE allows you to evolve gracefully and cost-effectively as technology develops.

- Because of the SunONE architecture, IT implementations are faster and less costly than other alternatives like IBM and Microsoft. Note to Marty: is there another vendor we could use than oracle? A lot of our customers install oracle on sun. Software integration costs are limited through "out of the box" operation with other Sun or third party products. Sun does not try to be all things to all people. Unlike those providers selling infrastructure, applications, and services, Sun's position is that insurance enterprises are better served by a "best-of-breed" approach, where optimized elements are integrated to leverage the best core competencies available.

- SunONE is enterprise-ready-supported by a network infrastructure expert that understands mission-critical product and support needs. It protects your IT investment by accommodating short- and long-term software architecture needs.

Sun's background in providing the security and reliability essential for Web-based processes is unparalleled. It's not an accident that the overwhelming majority of top Swiss banks run their security systems on Sun, as do many of the world's most significant financial enterprises that use the Internet for transaction processing, as well as government organizations like the Department of Defense. Our experience with essential security elements like Public Key Infrastructure (PKI) is deep, broad, and proven worldwide-an important consideration as security takes on higher priority in virtually all markets.

IV. SuperChannel Technical Architecture

{INSERT FIGURE ONE - SuperChannel Architecture}

The SuperChannel architecture shown above is based on the SunONE platform, and is designed to meet the new requirements of the insurance industry.

Within the SuperChannel architecture:

- Secure access to all key applications and content is provided to a Web browser attached to the Internet. Access can be controlled by organization, department, or user. Each user can have their own portal page, providing a view to both legacy and Web-based services for which they have authorization.

- The client can be a browser on virtually any Web-enabled device. (Note: SunRays can offer significant benefits for many operations vis-à-vis PCs, as no information is stored on local disks and strong user identification is achieved via smart cards.)

- Applications that are Web-based can be written in standards-based J2EE, and then run on scalable and reliable application servers.

- Content can be provided by scalable Web servers and access can be controlled by server or URL.

- User management can be done through standards-based LDAP directory and tied to legacy directories through a meta-directory. Strong user authentication can be achieved through ComTrust services using Certificate Servers.

- The entire solution runs on a reliable, available, serviceable Solaris

environment. Security begins outside of the firewall, where intrusion detection and virus detection products reside. (Sun Professional Services has a security practice which can deliver security consulting, design, and installation expertise.)

Enabling Today's Imperatives:
Identity Management through Portal Computing

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The SuperChannel technical architecture enables businesses in the insurance sector to strategically manage their identities through iPlanet portal computing technology.

Comprehensive identity management is a fundamental requirement for every enterprise now that directory-enabled applications power an increasing number of important enterprise processes, including resource planning, value chain management, security, firewalls, and resource provisioning.

What do we mean by Identity Management? Identify management is defined as the software infrastructure and associated business processes for managing the complete lifecycle of an identity and ongoing usage of an identity—including attributes, credentials, and entitlements. It is an enterprise-wide process that applies to all business operations and the entire corporate information architecture. An identity can be associated with a user, service, system, device, or community.

In today's business environment, identity information is typically scattered among many applications running on different operating systems, under the control of a variety of internal and external groups. These disparate sources of information may take different approaches to the organization of user entries, security practices, access and access control, as well as other important aspects of the information architecture.

Portal computing provides organizations a powerful means of managing this complex environment. Included among its principle benefits:

- 1) Portal computing enables organizations to provide their employees,

customers, and partners with easy access to business critical information and tools. It increases partner and customer interaction—and employee productivity—by simplifying usability and expanding overall usage of existing business applications, assets, and services. *The result? Greater return on IT investment.*

- 2) Portal computing enables organizations to serve distinct communities, providing the content and services each community member needs in the context of his or her role and task at hand—all while securing and preserving the integrity of identities.
- 3) Portals can improve employee productivity by providing a common start page for accessing information, services, and people. Then, a personalized view of organizational content can save users time, saving the company cost. Better access to information and community members helps to create a more informed, better decision-making staff.
- 4) Portals can increase business efficiencies across the extended enterprise by providing all members of the value chain with a common platform for interaction, communication, and transaction.
- 5) Ultimately, portal computing will improve customer relationships, decrease customer service costs, and increase revenues by enabling personalized customer self-service via portals. It will also improve the launch of new revenue streams by enabling the organization to offer customers new services quickly and easily via the established portal.

No provider can match the tools and technologies iPlanet brings to the portal computing environment:

- *They are proven.*

iPlanet Directory Server is the most mature LDAP directory server available, with over 700 million licenses shipped. It powers some of the largest e-business sites in the world.

- *They are open and flexible.*

The SunOne Identity Management platform fully supports open standards including LDAP, SSL/TLS, and XMM to help protect investments from expensive and rigid proprietary lock-in.

- *They have unparalleled design—and design support.*

The SunOne Identity Management platform's carrier-grade design provides the large scalability, exceptional performance, and high availability required by enterprise and e-business services that support millions of users. To reduce the cost-of-ownership, iPlanet provides a comprehensive set of management tools for online administration and maintenance.

- *They perform without peer.*

iPlanet Directory Server is the performance leader for LDAP directories. IPlanet scored a "perfect 10" in *Network World's* annual Best of the Tests Award Competition, winning the "Best LDAP Directory Server" over other offerings from IBM, Novell, Oracle, Microsoft and many others.

- *They provide a complete solution.*

As business relationships become increasingly complex, an e-business infrastructure must include a central directory for consolidation of employee, customer, supplier, and partner information. The SunOne Identity Management platform, built around iPlanet Directory Server, provides secure, open, standards-based management for e-business applications and services.

Detailed descriptions of specific iPlanet elements and their roles follow:

Portal Server

The iPlanet Portal Server plays a key role in securely delivering Internet services. -The Portal Server will aggregate all Web and non-Web services a user has rights to, and will securely deliver them to a common browser anywhere over the Internet. Additionally, the Portal Server aggregates content from both an organization's intranet or through other channels from the Internet.

The Portal Server overcomes a number of significant issues an organization faces in delivering Internet services. First, unlike enterprise or workgroup applications, organizations cannot always be assured that specific software clients are installed, nor can they always control their configuration. Portal Servers deliver all services to browser-enabled devices. The benefit is that organizations deploying services do not have to be concerned with client software installation. -For carriers that must mail out rates or illustration software, this can be a significant savings.

While the benefits of moving to Web-based applications are generally accepted, no organizations can move all their legacy-based applications at once. The Portal Server offers a unique solution to this problem.

Using a patented technology called netlet, the Portal Server can allow non-Web applications to tunnel through to a browser. For example, customers have used netlet to allow a 3270 terminal applet to gain secure access to a corporate mainframe. The user is authenticated, and when they select the mainframe application they desire, the terminal applet is downloaded onto the browser and communication is set up to the mainframe. Through netlet technology, an organization can provide a mix of Web and legacy applications while they phase in applications to a Web-based structure.

Policy can be set at the user, group, or organization level as to what services are delivered, how portal pages are configured, how users are authenticated, and so on. There are over 10 different authentication techniques to best match customers' specific needs, thus providing services to customers, employees, and partners-all with unique policy and portal pages.

Importantly, all communications can be encrypted. [Sun servers provide a](#)

solid and secure backbone for virtual private networks (VPNs). The servers' reliability, scalability, and remote management features empower employees to access a VPN anytime, anywhere, at levels set by systems administrators.

NEED A PARAGRAPH

ABOUT VPN FEATURES HERE,

—The Portal Server can also deliver unique views of Web content that a user sees both from the Internet (via channels) or through access to a part of an organization's intranet.

Web Server

The iPlanet Web Server provides a reliable, high performance infrastructure for delivery of Web content and applications. Intelligent load balancing enables better distribution of traffic across multiple Web servers in order to lower the risk of any single server becoming overloaded. Multi-processing and automatic failover ensure that requests to the server are handled even when a process crashes, and ensure that the failed process restarts automatically. To maintain high performance and security, SSL hardware accelerators are supported; and to ease administration, user information is stored in the Directory Server.

Application Server

The iPlanet Application Server provides high levels of performance, reliability, and scalability. It is fully J2EE compliant.

For high transaction integrity and continuous uptime, the Application Server eliminates single points of failure through application redundancy across multiple machines. The server distributes transaction state and session information across multiple systems to help ensure that user information and data are not lost during a failure. The Application Server provides the ability to grow easily through increasing CPUs or number of systems. It also provides integration to databases, enterprise applications, and packaged applications within an organization or its supply chain.

Integration Server

The role of the Integration Server is to allow applications to be loosely coupled together. An adapter is provided at each application that communicates to the application's API. The other side of the adapter communicates in XML to other applications through a common Process Engine, which not only takes care of communications issues, but also can deal with workflow and interconnect applications as tasks.

Directory Server

As organizations develop and deliver Internet services, it can become increasingly difficult and expensive to manage distributor, vendor, employee, and customer data. iPlanet Directory Server delivers three important benefits to assist in user management, thereby making large scale deployments more manageable.

- 1) It can provide a centralized, unified view of user information.
- 2) It provides facilities for delegated administration by organization, group, or attributes.
- 3) It has many facilities to manage how and when the replication of changes occurs across a set of directories.

Certificate Management

Depending on the data and services a user may access, a password may not be a strong enough authentication technology. A certificate, issued to the user by a trusted certificate authority, greatly enhances the strength of authenticating the user. iPlanet's Certificate Management System delivers a comprehensive Public Key Infrastructure (PKI) solution that makes it easy and economical for an insurance enterprise to deploy and manage its own certificate authority.

Specifically, the Certificate Management System enables organizations to issue, renew, suspend, and revoke certificates. Key features include:

- 1) Tight integration with the Directory Server for storage of certificates.
- 2) High scalability for deploying certificates to large extranets.

- 3) Conformity with key security standards (e.g., support for X.509v3 certificates and conformance to FIPS 140-1).
- 4) Flexibility in adapting to different business processes in managing the issuance of certificates.

Meta Directory

The Meta Directory's role is to integrate all non-LDAP directories and provide synching with all kinds of disparate systems used to store user credentials. The Meta Directory is flexible, allowing the customer to retain current practices in managing users. For example, PeopleSoft manages users in their own repository. MetaDirectory will allow PeopleSoft applications to be interconnected to LDAP. The customer may manage changes in LDAP or continue to make changes in PeopleSoft—either way, the other store will be automatically updated.

V. The Integratable Stack and Solution Sets

Sun's vision of the integratable stack-empowering a fully integrated Web development environment for advanced applications, and single click deployment of new applications and services-is ideal for the challenges facing the insurance industry.

Sun's story here is markedly different from IBM's. Sun has a stack that has been tested and tuned-as you manage it, you can use it as you like, and you're not bound to using any particular software throughout the system. The idea is to use the best solution within the stack for a given situation. Managing multiple pieces of software as one system translates into lower system integration and lower costs of managing software, and provides the ability to leverage a pre-tested stack of software, which eliminates time and labor. As the insurance industry is moving from a mainframe to a distributed environment, Sun's integratable stack fits with the increasing momentum in the industry.

The value proposition of SuperChannel is based on open systems-an operating environment and platform ideal for an industry in the midst of consolidation. This promise is enhanced by the fact that Sun doesn't aspire to be "all things to all people," and as such provides services and practices without darkening the sky with consultants. In today's changing marketplace, you do not want to be locked into a vendor, and with SunONE-based SuperChannel, you are not.

A solution set for the insurance industry can be seen as an integration of five stacks: hardware, replication, security, horizontal, and vertical. The architecture described above is the replication stack-the software architecture that runs on the chosen hardware. The security stack includes solutions for intrusion detection, virus detection, and access control. The horizontal stack includes applications like content management and customer relationship management. The vertical stack contains applications specific to your industry, for example Policy Administration, Claims Administration, Reinsurance, Commission Accounting, Statistical Reporting, Billing, and so on.

The beauty of SuperChannel is the flexibility it provides in configuring these

stacks—there is freedom to choose the vendor best suited for your business, not a vendor dictated by the platform provider.

Sun has a range of best-of-breed partners with applications that have been tested and run successfully in dynamic domains. Five years ago you wouldn't have thought of Sun as a software company, but with its acquisition of iPlanet—and with over 2 million Java developers—Sun is becoming more and more of a software company, especially in the infrastructure space with the iPlanet products. The SuperChannel initiative is a logical outcome of this development.

VI. Two for the Show

As noted above, no insurance company has yet built a comprehensive SuperChannel system, but leaders worldwide are beginning the process naturally by implementing the pieces. Included among these insurance providers are the following:

- AXA Colonia
- Highmark Blue Cross/Blue Shield
- Insurance Corporation of British Columbia
- Northwestern Mutual
- Providian Financial Corporation
- Prudential
- MetLife

Implementations at Northwestern Mutual and MetLife are provided in greater detail below to provide a sense of what is being achieved with the technologies upon which SuperChannel is based.

Northwestern Mutual

Northwestern Mutual is recognized as a premier life insurance company, building financial security for a broad base of individuals and businesses. With assets in excess of \$92 billion, the company is one of the largest providers of individual life insurance in the United States. It currently ranks 107th on the Fortune 500.

Early adopters of e-business technology, Northwestern Mutual began building a corporate intranet infrastructure in 1996 for its home office and field service employees. As Internet usage became common, the company wanted to provide the flexibility of allowing access to these corporate resources over the Internet as well as their private networks, while still protecting critical business data from unauthorized users. Business partners also needed access to this information, but controls were required to uniquely limit the information each could view.

"Our security concerns mandated that any internal information traversing the Internet be encrypted so that it could not be viewed by anyone who had access to the datastream," says Jim Rolfsmeyer, Northwestern Mutual's assistant director of Information Systems.

The company's other concern was keeping its corporate network protected by isolating it from the Internet. In 1998, the company's IT architecture team began researching reverse proxy solutions, but found no product available that met all their needs. Seeking a solution that would provide universal but secure Web-based access for its field force and business partners, the company turned in 1999 to the iPlanet Portal Server.

"The iPlanet Portal Server was the only solution that met all of our extranet access needs, including business partners, secure Internet remote access, and single sign-on," says Rolfsmeyer. "Because we were familiar with Sun's reputation as a leader in the Web arena, we felt comfortable with the decision to integrate the iPlanet Portal Server into our infrastructure."

Built on open and proven technologies, the iPlanet Portal Server enabled Northwestern Mutual to integrate its existing applications, and expand its reach without reinventing its infrastructure in a highly scalable and secure portal environment.

"One of the things we looked at was the effort it would take to convert our intranet to a secure server-and whether we wanted to do that and have a secure environment-or maintain two separate environments and push the content that we wanted to make available over the Internet to the secure environment. This method was going to be extremely costly and take longer to implement," notes Rolfsmeyer.

Using a standard web browser through Portal Server, client access expenses are virtually zero. The company also adopted the Secure Remote Access Pack, the extended offering to Portal Server with Directory Server to provide its full field force and business partners with a single point of access for its corporate intranet.

According to Rolfsmeyer, the implementation of the iPlanet Portal Server has

been very successful. The pilot solution was up and running in just 30 days, and currently there are 8,000 users on the system.

MetLife

As a leading provider of insurance to individuals and businesses, MetLife entered the crowded financial services market following its IPO in 1998. A mutual insurer for more than a century, MetLife's shift from mutual insurance into a market driven by intense competition was a dramatic step. It required an overhaul of the company's entire product and customer service infrastructure to meet the challenges posed by its new market-driven focus.

The company turned to Sun and Chordiant for a scalable, integrated eCRM solution. With a vision of being more responsive to the individual needs of each of its customers, MetLife needed to implement an end-to-end CRM solution that would integrate its core back-office and front-office applications, provide a business process driven environment, and combine multiple customer communications channels (i.e., Web, phone, fax, e-mail). The company also wanted to manage the costs of a new solution.

Being able to launch new products is vital, but MetLife also needed to manage the associated costs of such an initiative. The total cost needed to be less expensive than outsourcing, so the company looked for ways to build re-use into its delivery capability.

After reviewing several hardware and software vendors for a CRM solution, the company selected Chordiant Software running on Sun Enterprise servers.

According to Allen Harris, former CIO of MetLife, Chordiant was the only CRM supplier that had an understanding of legacy systems and multi-channel environments. Chordiant provides a robust CRM infrastructure solution that meets the extreme demands of large business-to-consumer enterprises. Its software enables MetLife to offer customers consistent and relevant services and support across multiple channels.

Chordiant had chosen Sun as its reference platform—a choice that Harris embraced. "I've had previous experience working with Sun Microsystems, and I

can vouch for Sun's reputation for delivering highly available, highly scalable platforms that are engineered to be up 24x7," he says. "I've always been impressed with the engineering focus of Sun, a focus I don't feel with other vendors. The way Sun systems are architected and operated is just phenomenal."

For its CRM solution, MetLife is using an N-Tier architecture of Sun Enterprise servers-the Sun Enterprise 420, the Sun Enterprise 450, and the Sun Enterprise 4500 with the Solaris operating environment.

"The Sun and Chordiant solution has proven to be extremely reliable and scalable," notes Harris. "We started with almost 150 users and moved up to approximately 300 with barely a glitch."