



E-Commerce and E-Business Trust: It's About the Money!

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President & CEO
VeriSign Inc.**

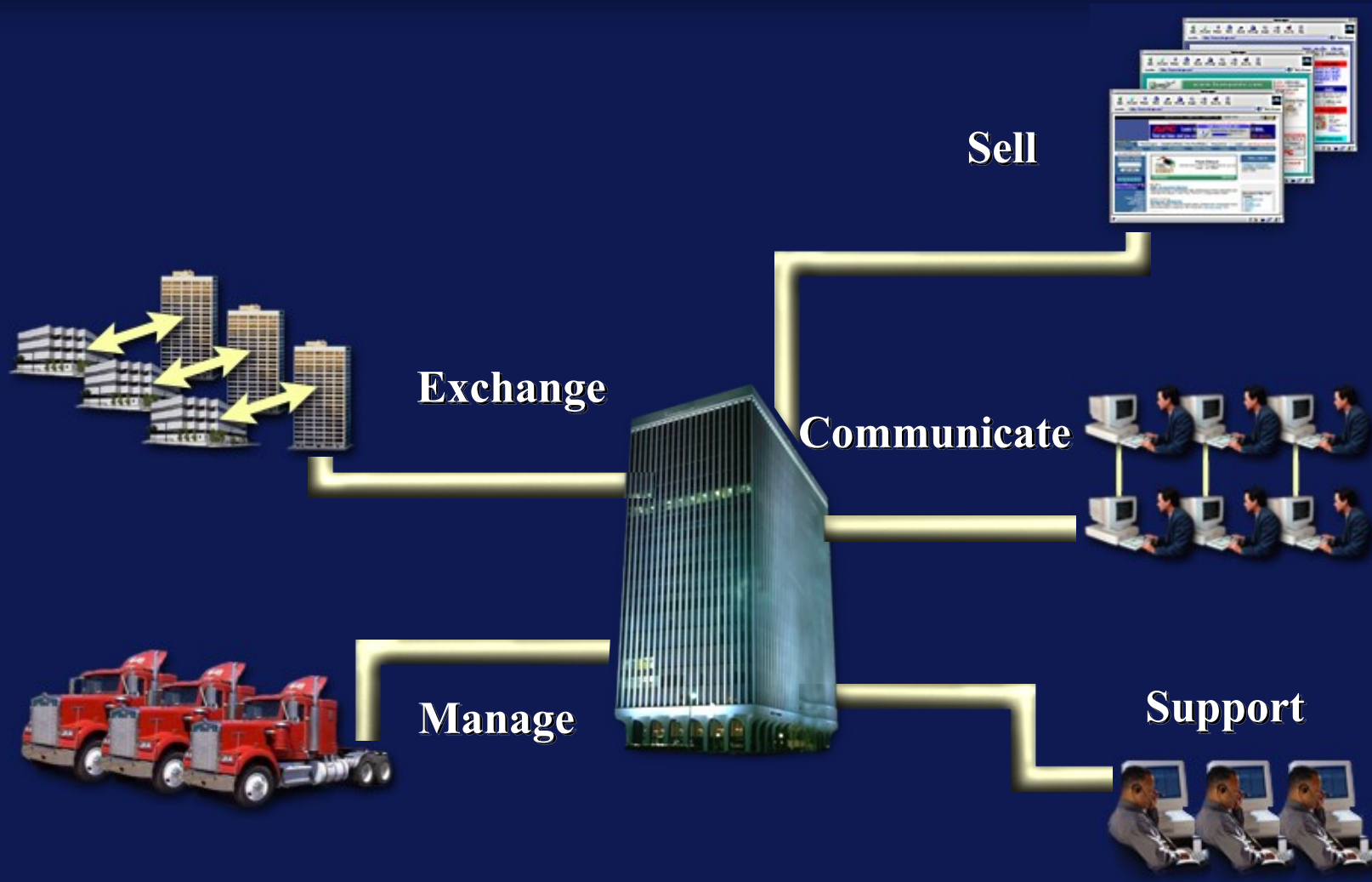


Important Topics to Cover

- ~~New technology from MIT~~
- ~~E-Security strategies for the new millennium~~
- ~~The latest in crypto thinking~~
- ~~Security at the chip and network level~~
- ~~What's up with Vint Cerf~~
- How about this E-Business thing!



E-Business Transformation



Sell

Exchange

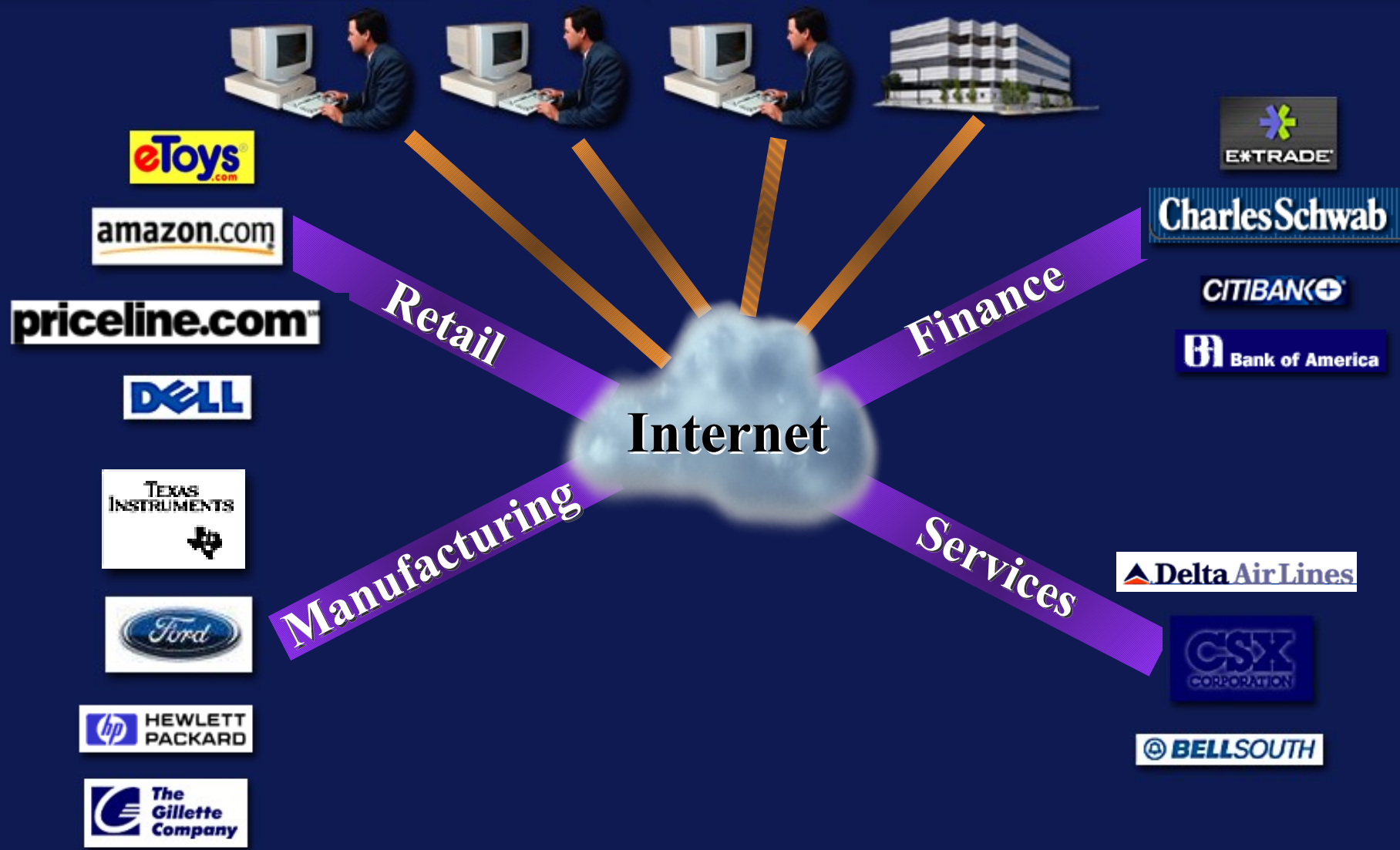
Communicate

Manage

Support



And It's Happening Everywhere





It's About Time and Money

- **More Revenue**
 - New customers
 - More services
 - Repeat business
- **Lower Cost**
 - Self-service
 - Supply-chain management
 - Competitive sourcing
- **Less Time**
 - Faster is always better



E-Business is Growing Up!

What's Hot

- B2B procurement
- Debt financing
- Vertical exchanges
- VPNs
- Info appliances

What's Not

- Retail goods
- Day trading
- Consumer auctions
- Lease lines
- Desktop PCs



Compelling B2B Projections

<u>Industry</u>	<u>E-Commerce Savings</u>
Aerospace	11%
Chemicals	10%
Communications	10%
Electronic Components	35%
Forest products	20%
Life Sciences	16%
Oil & Gas	10%
Steel	11%

Source: BusinessWeek and Goldman Sachs



And It's Just Starting

- \$114B in B2B commerce in 1999
- 30% of businesses already into E-Procurement
- 91% will purchase over Internet by end of 2001
- Ford and GM buy \$167 B off-line today
 - Both announced B2B portals in Q4'99
- 95% of servers needed by 2005 not shipped yet
 - Andy Grove, Intel



It Won't Happen Without Trust

- 1999 ITAA and E&Y Survey
- What's Slowing E-commerce Down?
- Over 100 top IT executives
- 62% cited trust as the top E-commerce barrier
 - Authentication was key to 60%
 - Privacy was key to 56%



The Role of IT Must Change

- Yesterday - The Gatekeeper
 - Data protection
 - Network isolation
 - User privileges
- Today - Trust Services Provider
 - Open up all the data
 - Connect to everyone
 - Establish “trusted” relationships
 - Facilitate transactions and communications



We've Got The Tools

Physical World



Digital World



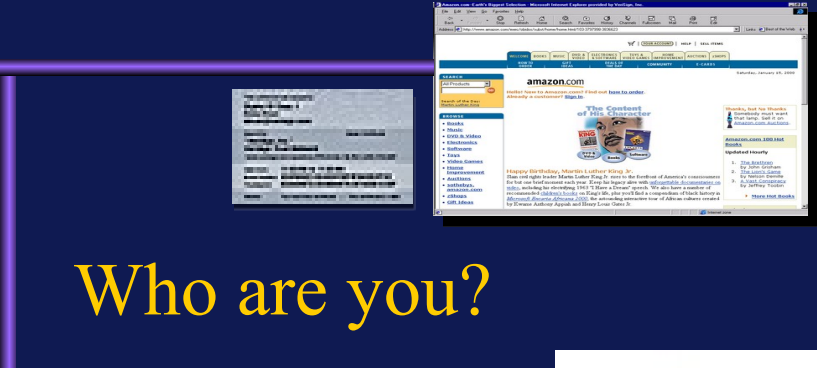
Encryption

Digital Certificate

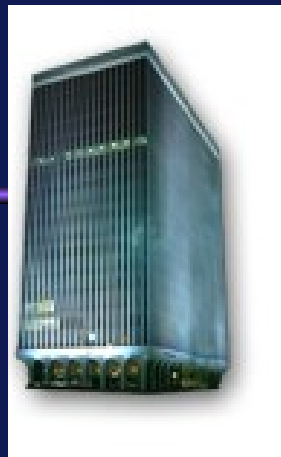
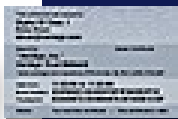
Digital Signature

Digital Receipt

Directories



Who are you?



Authentication

Putting It All Together



Who are you?

Can you pay?



Putting It All Together



Who are you?

Can you pay?



Can you prove it?

Authentication

Payment

Validation



It Should Be So Simple

What You Want

- Website transactions
- Customer self-service
- Business-grade communication
- Supply chain management
- Trading exchange participation

What You Need

- Basic encryption
- Access control, non-repudiation
- Secure and certified messaging
- VPNs & integrated Web ERP
- Community gateways, commerce services



Modest Success to Date

- Complexity of technology
- Application enablement
- End-user resistance
- Interoperability
- Vendor exaggeration



But Security is Growing Up Too!

What's Hot

- Zero footprint clients
- Auto administration
- Seamless integration
- PKI as utility
- Managed services

What's Not

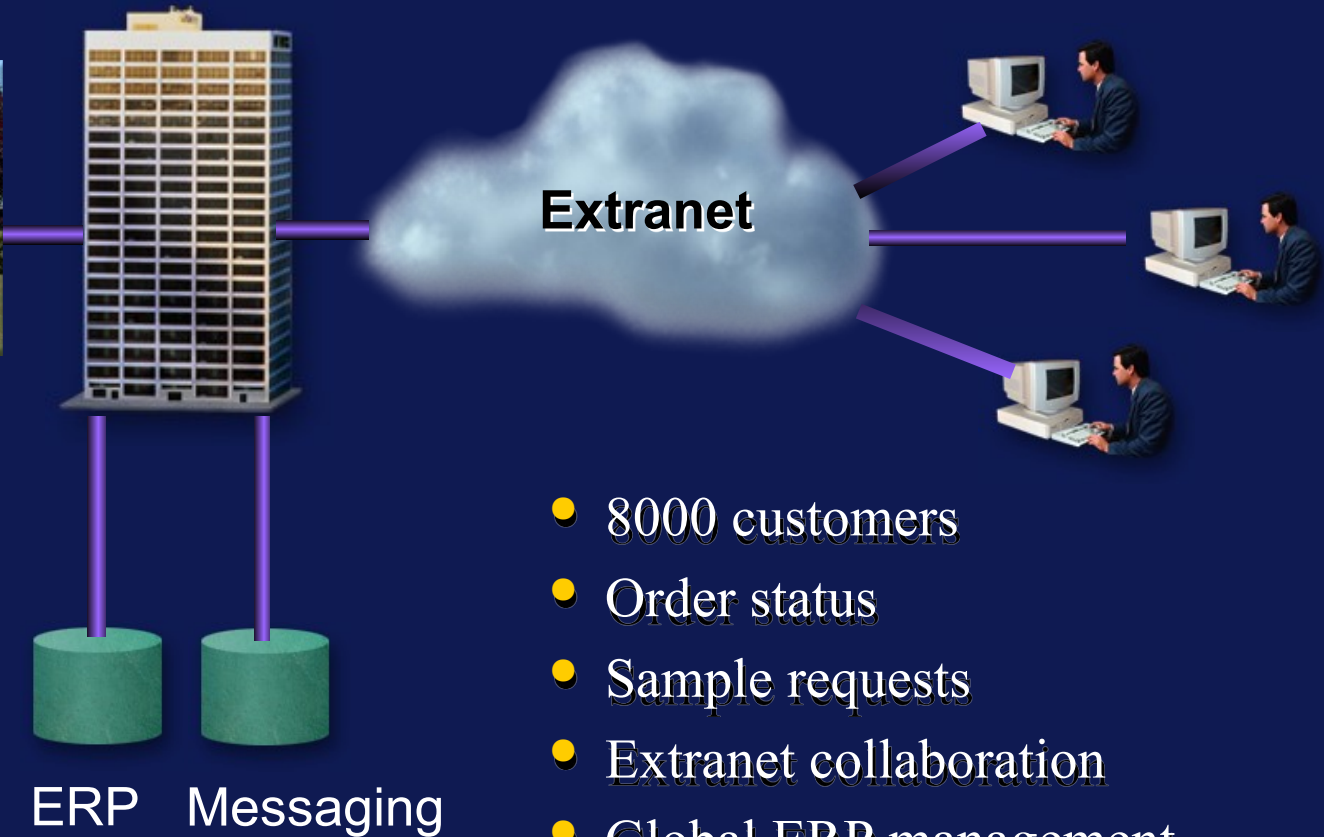
- Desktop security apps
- Manual authorization
- Discrete apps/directories
- PKI as technology
- More enterprise software



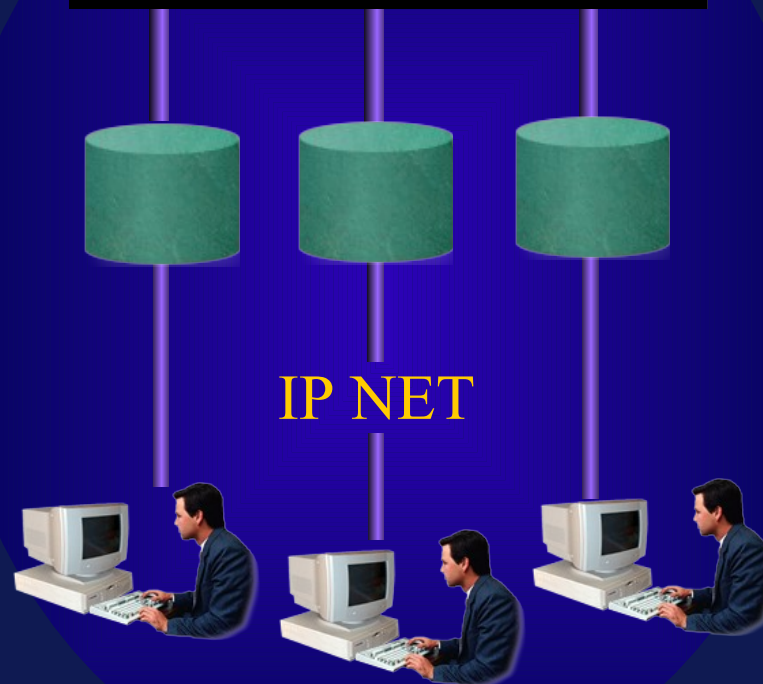
Ease of Use Demo

Personal Trust Agent
Server-side Administration
Authenticated Payment

 TEXAS INSTRUMENTS



- 8000 customers
- Order status
- Sample requests
- Extranet collaboration
- Global ERP management



- 40,000 employees
- In-house HR processes
- Automated expense reporting
- Purchasing productivity

Building A Trust Utility



Application Services

Authentication Services



Payment Services



Validation Services





Wireless Is For Real

- 1 billion mobile phones in use by 2003
- Will exceed Internet/PC clients by 2002
- Most common client device worldwide by 2005 (Gartner Group)
- “Killer App” for B2C e-commerce
 - e-banking, e-trading, e-shopping, e-messaging, e-healthcare



But It Adds New Challenges

New Challenges

- Processor Capability
- Data Bandwidth / Storage
- Gateway-in-the-Middle
- Consistent Trust Model

Authentication

Payment

Validation



Wireless Demos

Palm VII

Motorola GSM Phone

Wireless PTA

Server-side payment

- Trust is the driver for E-Business
- If you're still a gatekeeper, you're in the way
- Never sacrifice "ease-of-use"
- Deploy solutions not technology
- Demand that vendors become partners
- This is going to be fun!



What About Next Year?

- Digital notary services
 - Receipts, prescriptions
- Certified messaging services
 - Document delivery, tracking, risk management
- Authenticated payments
 - B2C and B2B
- Digital archiving and vaulting
 - E-mail, transaction records



THANK YOU!

VeriSign





Wireless Extends Trust Requirements

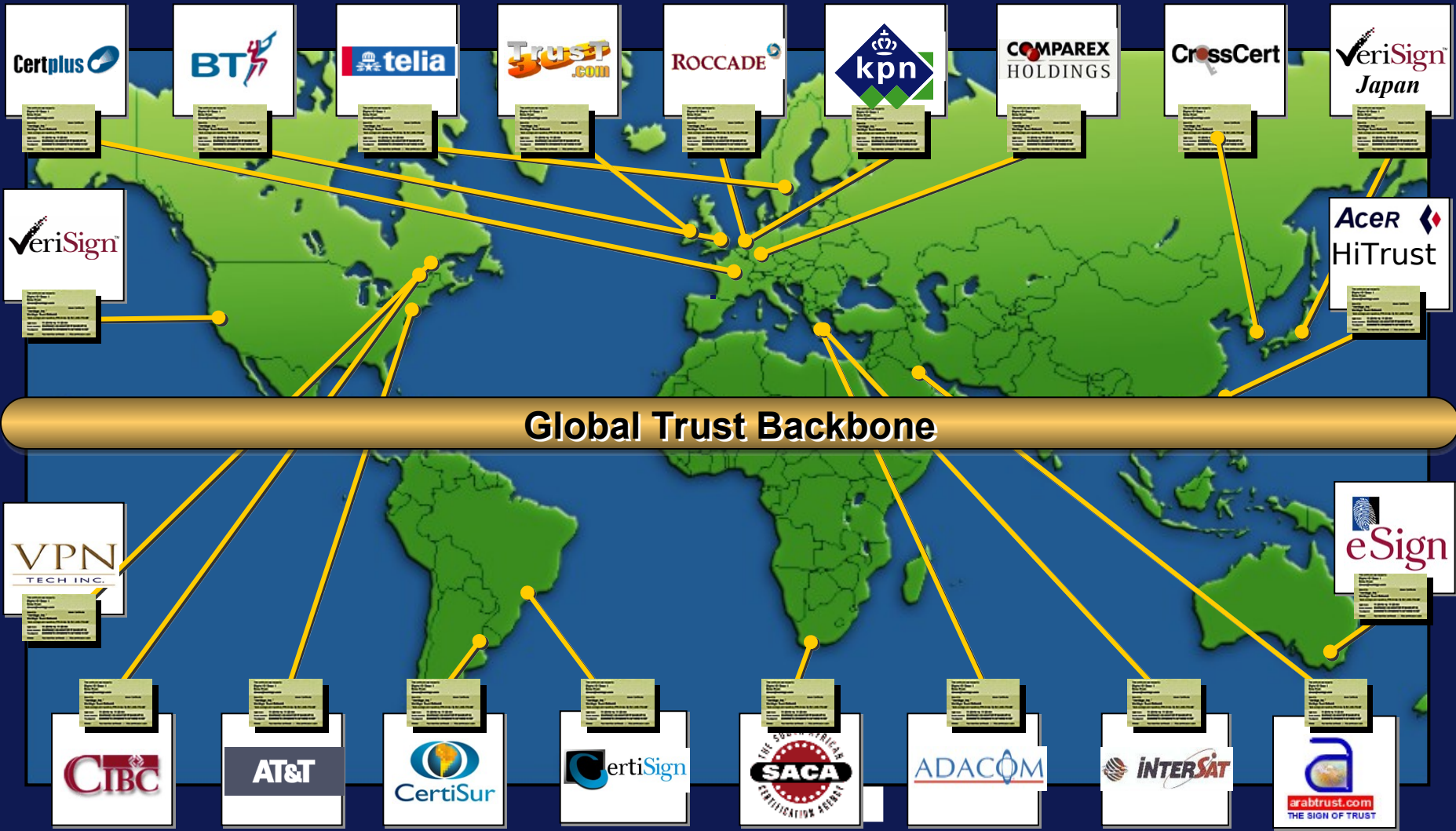




It Pays to be Trusted

General Motors, Ford Motor, Exxon, Wal-Mart Stores, General Electric, International Business Machines, Chrysler, Mobil, Philip Morris, AT&T, Boeing, Texaco, State Farm Insurance Co, Hewlett-Packard, E.I. du Pont de Nemours, Sears Roebuck, Travelers Group, Prudential Insurance Co. of America, Chevron, Proctor & Gamble, Citicorp, Amoco, Kmart, Merrill Lynch, J.P. Penney, American International Group, Chase Manhattan Corp., Bell Atlantic, Motorola, TIAA-CREF, PepsiCo, Lockheed Martin, Fannie Mae, Dayton Hudson, Morgan Stanley Dean Witter, Kroger, Lucent Technologies, Intel, Allstate, SBC Communications, United Technologies, Compaq Computer, Metropolitan Life Insurance, Home Depot, ConAgra, Merck, BankAmerica, GTE, Johnson & Johnson, Safeway, Walt Disney, United Parcel Service, Costco, NationsBank Corp., USX, BellSouth, Enron, International Paper, Cigna, Dow Chemical, Sara Lee, MCI Telecommunications, Loews, Atlantic Richfield, American Stores, Caterpillar, New York Life Insurance, Coca-Cola, Columbia/HCA Healthcare, AMR, Aetna, Xerox, American Express, J.P. Morgan & Co., UAL, RJR Nabisco Holdings, Lehman Brothers Holdings, Bristol-Myers Squibb, Ingram Micro, Supervalu, Duke Energy, Ameritech, Federated Department Stores, Phillip Morris, Petroleum, PG&E Corp., US West, Electronic Data Systems, Minnesota, Mining & Manufacturing, Sprint, Eastman Kodak, Albertson's, AlliedSignal, Sysco, Federal Home Loan Mortgage Corp., Union Corp., Fluor, American Home Products, Archer Daniels Midland, Raytheon, Delta Air Lines, Ashland, Viacom, Alcoa, McKesson, Northwestern Mutual Life Insurance, NGC, Wal-Mart Stores, Hartford Financial Services, Time Warner, IBP, Banc One Corp., Goodyear Tire & Rubber, Georgia-Pacific, CVS, Digital Equipment, Deere, Nationwide Insurance Enterprise, Southern, Kimberly-Clark, Pfizer, Dell Computer, Emerson Electric, Bankers Trust New York, Marriott International, Abbott Laboratories, United HealthCare, Rockwell International, Liberty Mutual Insurance Group, Cardinal Health, CBS, Wells Fargo, Sun, Seagate, Intel, Intel Group, Burlington Industries, Intel Systems, Tencor, U.S. Bancorp, Upjohn, Chulavita Sons, Public Service, McLennan, Amgen, Engine, CompuLink, Wachovia, Comcast, Shearman & Sterling, Progressive, GE Energy, Applied Materials, InaCom, Global Merchandise, Holdings, Wi, Mirror, Baltimore, Ridder, Aid, Global, Phoebe, Office Products, 'R' Us, Union Pacific, st Corp., Coastal, iCare Health System, Lilly, US Airways, up, Best Buy, A, Foundation, of America, Rite, ce Depot, Pharm, R.R. Donnelly, al, Case, Marsh, Gas, Cummins, Cooper Industries, lumbia Energy, CompUSA, NE Transporta, arker Hannifin, SA, Phelps Dod, r Hughes, Servi, logy, Reliance, l Airlines, Time, ion, 3Com, Kni, Power & Light, est Association

Top 40 E-Commerce Sites
Fortune 500
Global Financial Institutions
Government
Education





Why do Customers Care about Site-to-Site VPNs?

Dedicated line savings

Add sites

Upgrade low-speed sites

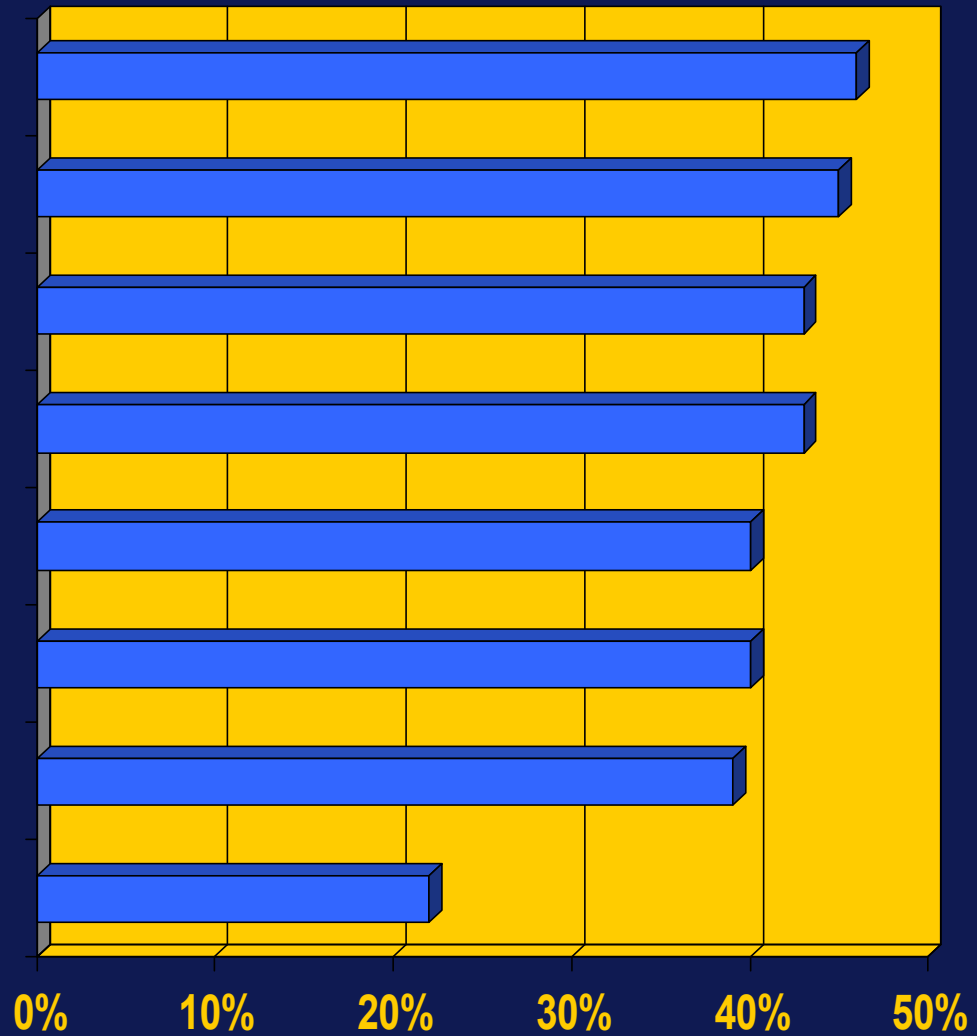
Increased coverage

Increased uptime

Reduce op & mgmt.costs

Replace leased lines

Replace frame relay



Key Trust Requirements



Authentication

Who are you?
Do you belong?
What can you do here?

Payment

How will you pay?
Do you have credit?
Did it go through?

Validation

When did it happen?
Do you have proof?
Do you have a witness?

- 62 million mobile workers by 2001
 - Infonetics Research
- 20% of global workforce will telecommute by 2003
 - Meta Research



Why do Customers Care About Remote Access VPNs?

Lower operating costs

Increased bandwidth

Increased coverage

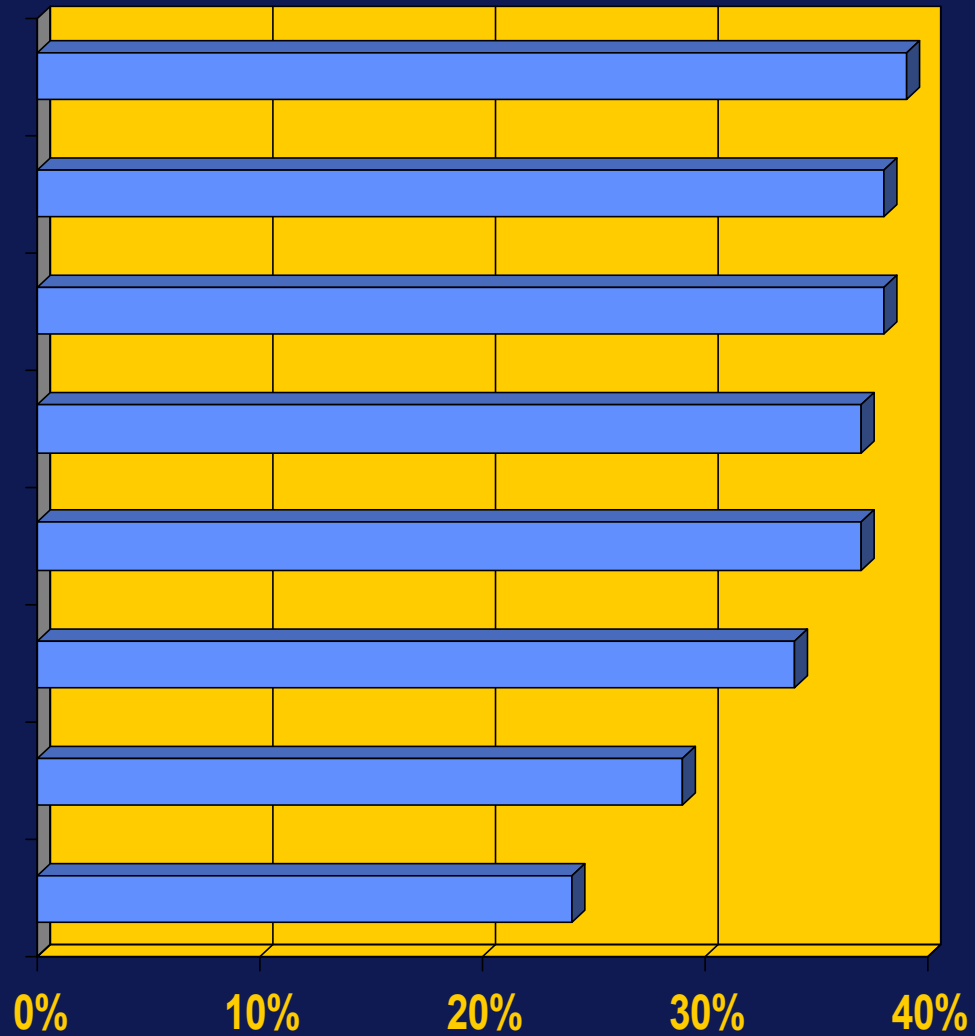
Domestic dial-up savings

Increased uptime

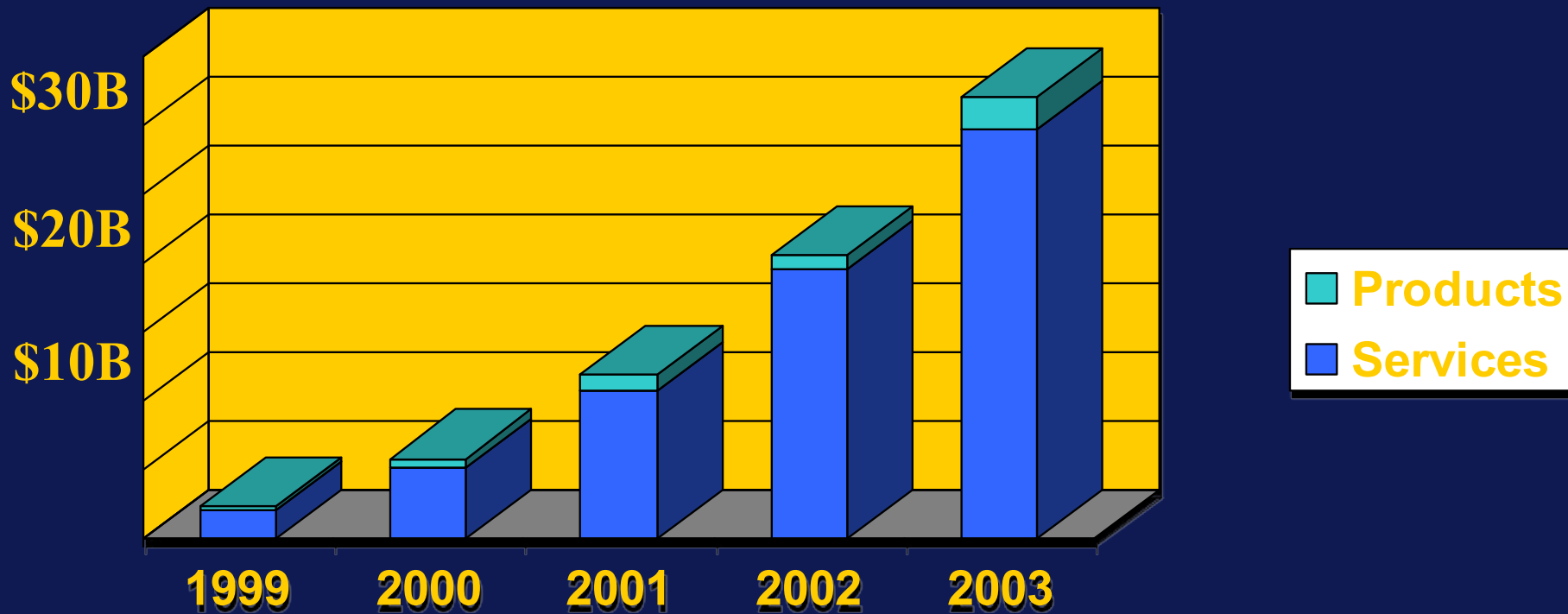
Add users

Less equipment

International dial-up savings



Worldwide Products & Services Expenditures





RSA Conference 2000

San Jose McEnery Convention Center

JANUARY 16-20, 2000