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Session 147PD
E-Commerce

Track: Product Development

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Panelists: TODD M. ERKIS
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JOHN GIBSON[I]

Summary: This session covers issues related to insurance via the Internet, specifically:

- *Sales-to-date and projected sales for life, annuities, and property and casualty*
- *Marketing approaches used*
- *Underwriting process and fulfillment*
- *Lead generation versus direct sales*
- *Product and pricing implications*
- *Lessons learned-to-date*

The panel of experts offers perspectives on the various ways the industry is utilizing the Internet and what we can expect to see in the future.

Mr. Todd Erkis: I'm a life and annuity actuary from PricewaterhouseCoopers in the Valley Forge office outside of Philadelphia. I will be speaking today on some general topics related to e-commerce and e-business, and we also hope to speak a little bit about how e-business is relevant to the actuary.

We have two other speakers. Vikesh Patel is with PricewaterhouseCoopers (PWC) in the technology implementation group. He works with financial services and insurance clients implementing front office, customer relationship management applications. Vik is currently a major part of PWC's virtual insurance company solution model. He'll be speaking about the virtual insurance company concept. The third speaker today will be John Gibson. John is a property/casualty actuary, who is a partner with PWC's actuarial and insurance management solutions practice in Atlanta. Prior to joining PWC in 1992, John worked for more than 13 years in the insurance industry, primarily in personal lines. As a consultant with PWC, John has

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Note: The chart(s) referred to in the text can be found at the end of the manuscript.

worked with numerous insurance companies as well as corporations with large self-insurance programs. John is a fellow of the Casualty Actuarial Society and a member of the American Academy of Actuaries. He has recently been doing a lot of work in the property/casualty e-business space. He's going to speak to us about a case study that he has worked quite a bit with called eCoverage, which is a property/casualty insurer that I think you'll find very interesting.

I've been in other e-business sessions, and one of the things that's very difficult for me to follow is the terminology. There are terms that we might think mean one thing in a financial services context that tend to mean different things in e-business. I hope to include many of the terms going forward.

So what's going on right now in e-business? Many insurers know they need an Internet presence, but they're not exactly sure why. They think because everybody else is out there, they should be too. There are a lot of company Web sites and brochureware, where the customer cannot make a purchase—only information about products or agent contacts is found. There's little, if any, online binding in life insurance right now. I know there's some in property/casualty, but, at this point, life insurance is a little bit behind.

The sales on the Internet have been highly competitive on price. We're talking about people mostly selling their same products that they sell off line, through agents or other distribution areas. They have been spending a lot of time on marketing. I went to a couple of the sessions earlier and the speakers gave information on how to sell business online. I found out about attracting traffic to my site, and dealing with aggregators, entities that enable buyers with a market to select among various competitors by aggregating information. Traffic flow is a strong focus and something that's very important to everybody right now.

The products that people are focusing on are mostly the commoditized products—term life insurance and fixed annuities. Variable annuities are out there, but the more complicated products are just not there right now. The results have not been that great. They've been less than promised. I know that a lot of people are wondering where's the money to be made out on the Web? Is this something that will be viable long term? I have costs for getting marketing. Maybe I'm still even paying agents to close the sale once I get people to come to my site. I'm still paying a commission at some point, and it can be as expensive to sell online as it is offline. The other thing that people are seeing is a lot of shopping on the Internet. There are a lot of quotes and a lot of people wondering what is really out there. But when you get to the point where you can make the sale or the customer provides a credit card or goes to the next step that allows you to get more information, you find people leaving. What we have found is that people still want to talk to agents. They still want the human interaction.

How many of you remember when ATMs came out? Many people thought it would be the death of the bank teller. Why would anybody go to a branch when an ATM is easily available? You go to the ATM to make deposits, transfer money, and make withdrawals. Why would anybody use a bank teller? Every day there are new banks popping up all over the place. People still need the human interaction. They

want the human interaction, especially in situations where it costs a significant amount of money to buy a product. They ask, "Is this right for me?" I think this is something that we have to think about and we have to try to make sure that we can understand and use to our advantage. It takes a long time to deliver products over the Web. Actuaries are still looking to do very sophisticated underwriting. We want blood samples and attending physician's statements (APSs). We want all the information we can get from people, and that takes time. You hear stories about people going on the Web, using a lot of time and energy to input their information and what happens? It says, "We'll have an agent call you." The agent might call in two days or maybe in a week. Even if you get to the point where you can actually input information and complete an application, then you have to set up a paramed, or get other underwriting information. It can take months to deliver an actual policy, but people in the online environment are looking for much faster turnaround. There's a lot of discussion on channel conflict. I'm not going into channel conflict much today. It could be a whole session in itself.

What I will talk to you about just briefly is what I've heard some companies doing. There are a couple of approaches being used today. One approach is increasing agent productivity. The agent has access to internal systems, up-to-date policy forms, and online status of the policies submitted. I think that's a good strategy. It somewhat defers the decision, but since this is a business in transition maybe that's the best way to go. Another is the multi-access approach.

Under the multi-access approach we will sell the same products everywhere, and we won't have the disintermediation where the insurance agent feels threatened by us selling our products. We'll look at it as another distribution channel, which is a valid strategy.

With all these challenges, why are we even thinking about the Internet and insurance? Maybe some of you are saying, Yes, that's true, why should we think about it? I think one of the big things is to steal a phrase from Mr. William Shatner: "The Internet is big, really big." A lot of people are predicting 200–500% growth. There will be gigantic sales in the future. The bottom line is nobody really knows. Nobody knows what the sales are going to be online in two or three years. It might take off. It might not. It might be something else, but what we do know is that the Internet is transforming the way every business does business, not just us in insurance. Do you think that five to ten years ago Border's Bookstore would have thought their competition was going to be Amazon.com? It is taking a lot of their sales. Did it know that it would have to join them?

It's going to transform insurance. That is for sure. It's transforming all businesses. What actuaries need to think about is how can we deal with the transformation? What are the things that we should be thinking about now that are going to hit in the future? Some of those can be thought of in what I have here with product development. We're going to have to develop new products. We cannot expect the current products to work in an online environment. We tend to have complex products. We tend to have products that we like to differentiate by putting on riders and extra bells and whistles so that agents can market your product and differentiate between somebody else's product. Complexity is not a benefit online.

Complexity is a detriment. We, as actuaries, need to be challenged, to challenge ourselves, and to develop new products for the Internet. They should not be the same products that we sell because it's a different environment. You have a different customer base with different expectations, and those expectations need to be fulfilled.

I know we've all had some thoughts about underwriting, and we believe this will be great. We'll get more information, but how can we deal with underwriting online? We need to think about what we can do to get the information we need. There might be a cost/convenience trade-off. One example, which obviously we're not ready for at this point, is how do we get over the privacy issues? I don't know that one yet. If people have the ability to store their information on a card and plug it into their computer, should they share this information with their insurance company? We can develop products that meet that need. We can say, "Look, we understand that you're hesitant to give your information to us. What if we offer a 10% discount? We'll give you a discount no matter how you're rated, because we want to get that information, and we want to incent you to plug your smart card in. If you don't want to, due to privacy concerns, that's okay. We'll still underwrite you. We'll still go through the less convenient channels of underwriting that are not online." We have to be able to give the customer a choice. You heard a lot, if you've ever been to any e-business discussions, about being customer-centric. I think being customer-centric, in a lot of cases. means giving the customers the choice of being dealt with in the way in which they would like to be treated. As actuaries, we need to think about that.

Another thing that's coming up is being able to deal with partnerships. The Internet helps speed transfer of data and dealing with other people. Speaking of the partnership, I had the pleasure of hearing Hussain Enan's talk. Mr. Enan is the founder and CEO of InsWeb. He had a very interesting discussion about dealing with aggregators that I thought I would share with you. He had six points on working with aggregators: 1) Must have competitive price, 2) Brand is very important, 3) Need to develop appropriate filters, 4) Agents need incentive to follow-up on leads, 5) Integration into legacy systems is very important, and 6) It is an iterative process. He focused on the point that, even going through an aggregator, it still has to be a business strategy. It's still a situation where you need to think of how you should deal with these people in a business way. Hussain discussed how we've all heard how you must have the most competitive price. You should, at least, be in the top five or you won't even get on the first page and they won't even see you. Brand is very important. Ratings are very important. People want to do business with people who they trust. That's no different than what we deal with everyday, even on the off-line environment.

There is the need to develop appropriate filters. His point there was companies sometimes say, "We want to be part of your InsWeb and here's what we want to sell. Here are all my quotes." What happens is they really have a target market in mind, and if they don't put in the right questions, they don't screen out people that they're really not interested in selling to. Then, you get so many people coming in that it overwhelms your situation, and you don't get the response time that you need. The agents take days or weeks to follow up. You have a difficult time trying

to decide who you want to talk to first and who you want to talk to second. What's important? It's very important to create the appropriate filters.

Agents have to be incented to follow up on leads. Mr. Enan talked about the need to have a piece of the action. They need to have an incentive by paying for leads, whether it's 25 cents, 50 cents, $1, or whatever. If they don't have some financial piece of it, they're not going to have the incentive to follow up on a timely basis. That will kill sales and leads through aggregators.

Integration. You definitely don't want to have to re-type in information that people have put online. That kills all the efficiency. I think that's an obvious one. The other one that I thought was very interesting is he has found that it's very much an iterative process. You have a good idea, you see what happens, you refine your filters, you work on some of the perimeters, and it becomes a situation that takes some time. Once again, it is not that different than anything else we would do on an off-line basis. The point is really that you have to have a good business strategy in order to deal with many things online, including aggregators.

One of the biggest things I find very exciting is the access to information is going to be improved dramatically. I think it already has in many cases. In some ways, we are still not ready to use this information. *Business Week* featured one really interesting property/casualty example. Progressive has set up in a pilot program in Texas; it has a really neat concept. They have asked whether people will put in a Global Positioning Satellite (GPS) sensor in their cars. There are privacy issues. I'm not trying to push this; I'm just trying to give you an understanding of things that people can do. If you agree to put this GPS sensor in your car, we will charge a much lower price. We will not treat you as someone who lives in Austin, Texas in a specific zip code, and price on an average basis based on you telling me you drive 10,000 miles a year, five miles a day, to and from work. By using the GPS sensor, I can actually price based off of what you really use. It changes the nature of the risk. I know there are privacy issues. The point I really want to try to get across here is it changes the nature of the risk. In insurance we are able to identify and price for risks. We also need to be able to use this kind of information as it becomes available.

There is another area in which I think we can improve efficiency and lower costs. There are a lot of global companies now. There's a lot of consolidation in the industry, and there are branches all over the place. It's very difficult sometimes to transfer data. I actually have been working on an example. It deals more with reinsurance and direct writers, and I think it's a very good example of the types of things that can be done now. Companies can really save money and improve efficiency at a small cost.

Chart 1 demonstrates my understanding of what the model is today, based on talking to reinsurers and direct writers about what the model is today and how data gets transferred. It's pretty straightforward. The upper left corner of the chart shows the direct writer. Direct writers would cut their seriatim policy file. This could be tapes or CDs. Some people might still use hard copy. Hopefully, it's electronic. That would go to their own financial area where they can do their own

processing, which is shown in the lower left-hand corner of the chart. That also goes to the reinsurer. The reinsurer should get it in a timely fashion, but this doesn't always happen. The reinsurers read in the data, and then the actuary is somewhat out of the process. They rely on the IT area. When the extract file is provided, the actuary can actually do something with it. It takes awhile. It is time consuming. I think of it as transferring data. We can now transfer information. Forget about the data. What do we care? Actuaries are not going to look through 100,000 policies. We really want the ability to look at 100–500. We want to be able to do a search and figure out what we want to look at, and we want to see the big picture. We want to see the information. We don't really want the data. We need the data at some point, but we don't need it immediately to manage the business.

So the new model uses this Actuate tool. PricewaterhouseCoopers has a strategic partnership with Actuate. Let's look at how the model changes (Chart 2). It starts off the same where the direct writer populates a server with data. It's out on the Web and multiple people can look at the information at the same time. Actuate is a very powerful reporting tool. It can do calculations, use data in a structured format, and produce reports. It has strong security with passwords. Different reinsurers can access the reports. The direct writer area can also access the reports.

Table 1 shows an invoice of money going back and forth between insurer and reinsurer. It shows premiums and benefits paid, and it gets updated on a regular basis. You can see that it's browser-based. On a spreadsheet, you would be able to click on whole-life, which will take you down to more detail.

This can be designed in any way. It's very flexible. If you click on the year 2000, you get your seriatim detail. All these reports and the seriatim data can be downloaded. It gives you the information on a real time basis. It's searchable. You can say, I want to see all my female substandard risks that are greater than 65 years old. It will give you a report. It also has Online Application Processing (OLAP) capability, which means you will be able to do Excel-type pivot tables or other online calculations in real time using your browser. It's a neat idea. Once again, use it as an example for things that we, as actuaries, can do now. We can use those tools, improve efficiency, and lower costs.

TABLE 1
Summary of Invoice

Ceding Company:	XYZ Life Insurance Company
Reinsuring Company:	ABC Life Reinsurance

		Current Month					
AUTOMATIC Product	Year	Premium	Expense Allowance	Extra Premium	Total Premium	Benefit Amount	Net to Reinsurer
Whole Life	1988	$137,142			$137,142		$137,142
Whole Life	1989	$159,862			$159,862		$159,862
Whole Life	1990	$207,407			$207,407		$207,407
Whole Life	1991	$173,129			$173,129		$173,129
Whole Life	1992	$161,225			$161,225	$733,333	($572,108)
Whole Life	1993	$199,785			$199,785		$199,785
Whole Life	1994	$167,473			$167,473	$1,680,333	($1,512,861)
Whole Life	1995	$474,656			$474,656		$474,656
Whole Life	1996	$994,861			$994,861	$333,333	$661,528
Whole Life	1997	$986,215			$986,215		$986,215
Whole Life	1998	$1,068,227			$1,068,227		$1,068,227
Whole Life	1999	$1,077,499			$1,077,499		$1,077,499
Whole Life	2000	$1,059,103			$1,059,103		$1,059,103
All Years		$6,866,557			$6,866,557	$2,747,000	$4,119,557

What else can the actuary do? When I go to technology presentations, I always find that I walk out and say, that was really interesting, but how does it effect me day-to-day? I have a harder time understanding that. What I was hoping to try to do here is to say, these are some things that actuaries can do, right now. This has a very strong technology focus. One of the things that I found is actuaries can play a very strong role. We know a lot about insurance from the beginning of marketing and designing products all the way to the end of reserving and financial reporting. We need to be involved in systems jobs. It's not just a systems job. It's a business job. It's system integration that affects the way that you're going to do business and actuaries should and must have a role. We can go and develop Internet ready products. Somebody's going to come up with the next bright idea like Progressive with the GPS. Hopefully, someone will soon come out with a different type of product that really works well for the Internet. It's going to happen. We need to start thinking about it. We can develop underwriting rules. We can use productivity improvements to really cut costs today. Everybody is worried about costs. Every time I deal with companies, or attend meetings, one of the first things I hear is, "We have to cut costs. What are we going to do to cut costs?" We can use this, and it will really help the way we do business. It will cut cost, and it will give actuaries much more control of how you price your products and how profitability comes around. The other thing is financial reporting. You need to be able to use this type of real time information in order to manage our business and know what risks were on. The Internet is going to move at e-speed. If we don't stay on top of who's buying our products, others will. If we have a quirk in which a substandard 65-year old can get $2 million worth of insurance for a real small price and somebody figures it out, you've got to believe that everybody in the world is going to know it. If you're looking at reports with a three-month lag, you might have a surprise. You might suddenly get a lot of business that you don't

really want, and you don't have the chance to shut down until you really get way past the point of no return. We have to start managing on a real-time basis.

Like I said, there are a lot of neat things coming up. There are e-market places being developed. We're actually working on a concept right now with the reinsurance e-marketplace. I can't get into much detail because it's still in development, but it has some major backers and some very well-known systems people. It's going to happen, and I think people are going to find it very interesting.

We have to be ready to use the smart cards and new technologies. They're going to come through and just like this GPS example, it's going to happen. Are we going to be able to use them? If we don't, our competitors will.

Let's discuss convergence. It's not just financial services industries that are coming into play. There are retailers out there who can hook up with a manufacturer to manufacture insurance products. With the way that the barriers among insurance, financial services, and other industries are decreasing, it's just a matter of time before a retailer like Nordstrom, (which has a strong brand, strong reputation for service, and a great customer base), brands a product. They won't be in the insurance business. Don't get me wrong. I'm not saying they're going to hire actuaries and develop products, they're going to do what they're good at. We have to be ready to either be the manufacturer to work with them or to be in competition with them. Of course, privacy and regulatory issues could be a whole session.

In conclusion, things are changing. They're going to change. They're changing now. We can't stay in our shell and hope that the Internet is going to go away because it won't. Actuaries must have a significant role. We will have a significant role. We need to be able to show our value and show how we can be ready to use what's going to happen. We need to use the Internet to do more than just sell the old products. Finally, you can have an impact on your company's bottom line or profitability. There are expense reductions and productivity improvements. We've been through the age of the computer and the age of e-mail. Information is our business and the Internet helps with getting access to information. We have to be prepared to use it.

I'd like to introduce Vik who will speak about the virtual insurance company concept.

Mr. Vikesh Patel: I have more of a technology focus so excuse me if I don't talk too much about day-to-day actuarial life. I want to start off by talking about some industry trends. The market is ready for insurance. The market is ready for e-services. Customers as well as companies are demanding it. Customers want more information to formulate their decisions. They want immediate decisions right away on price and product and service. They want to be able to access this information or have access to buying or purchasing products 24 hours a day, seven days a week. Companies are demanding this from a cost-savings perspective. They feel that this is a channel where they can save a lot of costs in terms of reduced paperwork. They feel that this is a new channel, in addition to their other

sales channels through which they can potentially gain some revenue and decrease costs. An important piece is there's a lot of talk about disintermediation and conflicts within the distribution channel. They can add value to the agents that are selling their products on a day-to-day basis by making it easier for the agents to get information to do business with a carrier that has some kind of Internet or electronic presence. It goes back to e-enabling the agent, and giving him an incentive to act on the leads that he has been given. He can close in on the leads online. I'll discuss how they're going to do it with the Virtual Insurance Company model.

Another aspect on the enabler side is technologies are in place. All of you have access to the Internet in some way, shape or form. It might be at home, at work, on your cell phone or your Personal Digital Assistant (PDA). You, as a consumer, are more sophisticated and want different channels to buy insurance products that will help facilitate or meet your daily lifestyles.

Business services that are going to be enabled on the Internet, specifically from an insurance prospective, are going to grow from $22 billion to $220 billion. We don't know if that's really going to happen. The research is pretty reputable. The statistics show that there's a tremendous growth opportunity with e-services. The largest seller or segment that's going to take advantage of this is the financial services industries. They're the ones who I guess have the money and the cash flow to grow the segment online and to benefit online. There will be regulatory roadblocks. People in the past have said, I can't buy anything online. There was no way to verify that the person on the other end is the person applying for the coverage. E-signature legislation has been passed. You have a potential way to bind the contract online at the end of the sale.

Let's discuss the demand for e-services and the carriers' ability to meet some of this online functionality. The demand is high but the insurance companies are very slow in meeting this demand for the consumers. The demand for requests for quotes is at 67%, yet only 24% of the carriers are providing that type of functionality. The same applies to the policy changes, underwriting status, and agent information. The agent information piece here is an interesting point because obviously the agents are the direct sellers of their insurance products so carriers are more willing to invest in meeting the demands of these agents because they are actually impacting their bottom line. Do you wonder, if customers are demanding quotes, policy changes, and the underwriting status online, why aren't they demanding more purchases online? I think the study directly asked carriers about what they perceived the customer wanted. They perceived that the customer wants quotes, policy changes, and so on, but they don't want to purchase insurance online. That is kind of hard to believe, but again, it's from an insurance perspective.

As for the annuities market, 73% of annuities providers are using the Internet to educate the public about annuities and their products. They're using the Internet to support their existing distribution channels, the agents, their brochureware, and so on. They're providing some forms of customer service to customers and a good

portion of what they're doing now, through aggregators, is generating leads to sell more insurance.

The last piece has an interesting statistic. Only 27% are planning to or are currently using the Internet to sell annuities. You might ask, why is that? Annuities are complex products. They're less common in the industry, and they're less understood by the customer. It's not like buying car insurance. You have to buy car insurance. That's not the case for annuities. People don't have to buy an annuity. Annuities are really sold to a customer. Annuities are more complex, and you really have to educate the customer on an annuity product.

Table 2 shows the functionality that some of the larger companies have implemented. It doesn't encompass all of the functionality, but it shows some of the high-level functionality. Many of the companies have the ability to take e-mail, annuity, and product information online, and even put a prospectus and some applications online. They might not be fully connected to the back office systems, but the customer can fill out an application. Some have the ability to transfer funds; that's assuming that they can do the full application online and take a credit card number to start the sale. The others provide account value.

TABLE 2
Larger Companies Have Implemented Some Functionality

Company	***Take E-mail***	***Annuity Information***	***Product Information***	***Prospectus/ Application***	***Transfer Funds***	***Account Value***
Hartford Life	Y	Y	Y	Y	N	Y
TIAA	Y	Y	Y	Y	Y	Y
Equitable of the United States	N	Y	Y	N	Y	Y
Aetna	Y	Y	Y	Y	Y	Y
American Skandia Life	Y	N	Y	Y	Y	Y
Lincoln Financial Group	Y	Y	Y	N	N	Y
Sun America	Y	Y	Y	Y	N	Y
Allmerica Financial	N	Y	Y	N	N	Y
John Hancock	Y	Y	Y	Y	N	N
MONY	Y	Y	Y	N	N	N
Jefferson Pilot	Y	Y	Y	N	Y	N

On the other hand, smaller companies have less functionality (Table 3). They have some ability basic to e-mail and to capture e-mails. They also have some annuity and product information, but they really don't have the ability to do a prospectus and applications online or to transfer funds or view account values. We feel that the gap has a lot to do with the cost and resources associated with creating an Internet presence. Large companies have the dollars and resources to create an

Internet presence, leaving the smaller companies at somewhat of a competitive disadvantage. Just keep all these pieces in mind.

TABLE 3
Smaller Companies Have Less Functionality

Company	***Take E-mail***	***Annuity Information***	***Product Information***	***Prospectus/Application***	***Transfer Funds***	***Account Value***
American Investors Life	Y	N	N	N	N	N
Northern Life	Y	Y[1]	Y[1]	N	N	N
Lutheran Brotherhood	Y	Y	Y	N	N	N
Zurich Life of America	Y	Y	Y	N	Y	Y
Allianz Life of North America	Y	N	N	N	N	N
Safeco Life	Y	Y	N	N	N	Y
National Western Life	Y	Y	Y	N	N	Y
CNA Insurance	N	Y	Y	N	N	N
Standard Life of Indiana	Y	N	Y	N	N	N
Franklin Life	Y	N	N	N	N	N

[1] - Information available to agents only

The next big current trend is insurance portals or aggregators, as was mentioned earlier. Portals are online consolidators. They provide relevant information and services that are of special interest to a targeted group of people. Who are these targeted groups of people? These are the folks that don't want to talk to an agent. They know what they want. They just want to go online, get a quote, and buy it. It's a different audience. You're attracting customers from a different channel. Portals act as a referral center for insurance carriers. Some of them are licensed insurers. They have the ability to give you a quote and close the sale online. They provide the quotes to the online customers, and once they get this customer information, they send it to the respective insurance companies. Then the insurance companies new world front office meets up with the old world office. The new world is where I'm online. I put in all my information, and I get a quote. That's where the new world stops. Once a quote is taken, the customer will pick the company, the information will be aggregated, and then the portals will send the information back to the insurance company selected. They will either forward the lead to an agent or send out an application form. Is that efficient? We don't know yet. Again, it's just another piece to keep in mind as I move forward. InsWeb and Insurance Market are just some examples. Quicken also does it. You have a lot of financial services companies that are now starting this up, but they are doing it in a small capacity.

We've talked about portals. Another trend is outsourcing. What is outsourcing? A question was asked before the session began. Outsourcing is essentially contracting out some of your non-core functionalities within your business. I'm

going to talk about outsourcing technology infrastructure and application software infrastructure. What are some of the advantages of this? In today's environment, information technology (IT) resources are scarce and expensive. It's very hard to find good qualified IT resources that know the business. I think this is where the actuaries can help these scarce technology resources within an organization to help potentially develop these solutions. It frees up IT resources. It outsources applications that don't provide a competitive advantage to your organization. For many organizations, I could give a perfect example of servers and all the computer hardware. Do you really need to have a full-time staff maintaining and monitoring and upgrading? You don't need to devote all of your IT resources to these endeavors. You can ship them to more strategic endeavors within the organization. As Todd was saying, let's mind our databases, let's look at some information, let's push the information on the Web so everybody in the organization has access to it. Let's provide ways to report and develop processes and procedures to create the new products.

I spoke earlier about smaller companies being at a disadvantage because of the associated costs. This is an appropriate example where a small company can outsource a lot of their technology needs both from the hardware and software perspective, and, essentially, farm out the design and specs. Yes, there are risks. We could spend ten sessions talking about the risks of outsourcing. A small company can easily set up an infrastructure, at a high level. It could be outsourcing to start the insurance company or start a presence on the Internet.

Outsourcing in the U.S. has doubled every year since 1997. The prediction is from 2000 to 2001, it's supposed to double from $10 billion to $21 billion. That's a lot of money that small companies, middle tier companies, and large companies are investing. However, as a percentage of their total expense, it is very small as opposed to if they did it internally themselves. I'm sure this number is going to get larger every year. I foresee it doubling every year in the foreseeable future.

A quote from the CEO of Oracle, Larry Ellison, "We think this ASP business is going to be huge." CEOs in the technology industry that are very powerful and influential in technology are saying this. It's a growing trend, and I personally work with clients that are considering this option as opposed to doing it all internally.

We want to think about another strong trend, which is the virtual company. I'm going to try to put together all the trends that I spoke about earlier. What is a virtual company? A virtual company is a company that outsources all of its non-core competencies and transactional low-volume functions. What are they? I gave you the example about servers and hardware and computers. We don't need it. That's our core competency. Let's focus on an internal resource in the business that we're good at selling, which is insurance and annuities. Another piece is marketing materials and literature. You don't need to print that internally. You don't need to mail them. Outsource it. A lot of companies are doing this right now.

I just wanted to show some non-technology related examples of outsourcing. What does a virtual company essentially do? It essentially retains all the customer facing, high value-added functions. The functions include sales and marketing.

There's also product development. This is an area where the actuaries come in. The actuaries can help with the virtual companies. There are actuaries that should be involved in the entire product development cycle. They are working with the marketing folks and the technology folks to design products that will meet, like Todd mentioned earlier, the consumer that wants the products that we can sell online. These are products that don't require a lot of back-end investigation. These are the products that can be sold online without any need for parameds or any kind of record checking. Another big customer-based activity is service. If you are selling a product, you also want to service this product. You want to go to full circle from a sales perspective. You want to be able to sell a great product and service it. As for the delivery of the product, you want to say, "Here's your product from XYZ company," and you want to be proud of that. You want to retain those core functionalities. Again, these customers facing high-value functions can be different for every company. Some companies might want to farm out claims processing or their service organization or whatever. Each client is unique.

It allows the organization to focus on its core competencies and it's strengths. It should create, sell, and service products that the customers are demanding today.

I'd like to talk about the virtual insurance community or company model. We are currently, just as a background, using this model to provide solutions for some of our insurance clients and our financial services clients. This model takes services (such as, developing products, marketing and selling products, underwriting, administering contracts, commissioning payment, processing claims, and managing investment) and tries to contain them in one integrated solution set. It combines the e-sourcing, which is all of your application outsourcing and information technology or software outsourcing with some of your business process outsource management. What is the business process? You are taking some of the best practices of businesses around the country in your industry and putting them together and bringing those processes into this solution set. It's a global solution for the financial services market. What does that mean? A company can be based out of Singapore, and if it is licensed in America, it can sell insurance in America. All of its servicing can be done in another location. It doesn't have to be done in one area. The reason we put a global solution here is because we have a lot of financial services companies. Citigroup, for example, is global and worldwide. It wants to be able to provide not only insurance and annuities domestically, but there are huge markets in Japan and Asia. There's a large amount of capital and untapped business in Japan. As the regulatory environment changes within Japan, I think we will see a lot of global financial services solutions there.

How do we bring these integrated solutions together? We take a lot of the best-of-the breed applications. What are these types of applications? They are claims systems, billing systems, commission systems, and other types of systems that an organization uses to process and serve customers. We can easily bring all these information systems together via technology called middleware and have a front-end Web interface. Middleware is software that allows two or more independent applications to communicate with each other. The information then flows from the top down into all the respective systems.

Let me give you an example. Let's say I'm a customer, and I want to get some information from my policy. I go through the Web. Now I'm going to go through the back-end. All my information gets filtered down. The middleware technology that we have in place goes to legacy and policy administration systems, sends a trigger out to that database that says give me information on this customer. The middleware translates it into the Web interface. I'm being very simplistic. It's somewhat more complicated than that. It sends it back up to the Web saying, this is your policy number, this is your coverage, and so on. If it's a claims issue, the information travels from the Internet, into the middleware, and it goes into the legacy claim system. It works within existing infrastructure. You don't have to get rid of the legacy system, unless you'd like to. But what are we doing? We're integrating legacy systems into one solution set or one system. All information flows through the middle and up to the top, through a Web interface. It can be very competitively advantageous for a customer.

What do I do with a system like that? Todd was talking about information that actuaries can have. If all your information is in one integrated system, isn't it a lot easier to get that information out? In this solution set, we are going to standardize a lot of the information. There's the access, the input, and the output. The bi-directional data interfaces among all of the applications, and it allows you to use that Actuate tool to get connected to this solution set and put a pipe into it, so to speak, and be able to draw information out of it. Again, it is not done in a three-month or four-month lag; it's done in nearly real time. You have to configure this system. It costs money and it takes some time, but once the system is implemented, it's definitely a value added to the organization.

So now you have this virtual insurance company. How do you bring this all together? Chart 3 shows how all the parties are involved. In this virtual insurance company, you're really depending on a lot of different groups of people working with you. There is your insurance company. You need insurance licenses to sell the insurance, and the company has them. There's the technology infrastructure and application outsourcing. This is all the outsourcing I spoke about earlier. You were outsourcing hardware and software applications. The software is your claims processing, billing, commissions applications and so on. Your portals or aggregators are right where the Web interface is. If I'm online, and I want to buy a car insurance policy, I can do it all on online. This is where the new world will be leading the old world.

Finally, there's that convergence where you can do everything online. You can get a quote online, hit the buy button just as if you were buying a book on Amazon.com. It would go through the same processes. The process is very complicated to talk about. It would then go into the computer, go through all these business rules, take the data that you've entered, answer the business rules, and then spit out an insurance policy with a policy number. If you hit print, you'll have an instant policy. John will be talking about that same model in his case study with eCoverage. You will have a definite idea of how the virtual insurance community or company can come together.

Then you have your products and services. These are the companies that provide all your risk assessments. They do the parameds for life insurance policies or for an auto policy, and they check out an individual's driving record.

You have your core insurance software folks. They're involved in the claims policy administration. Again, there are commissions. These are applications that you could potentially outsource or keep in-house and build upon.

Then you have your component providers. These are the folks that are the middleware; they are kind of the glue that brings all the systems together. I'm talking from a systems perspective now.

You have your integration of products and services, and the portfolio manager and administration. I am always working with clients to develop a standard front-end and I'm working on a data model. Each company can have its unique data model.

Working with the workflow. How does each company do its business right now, and how can we improve upon it? In every technology implementation, you have to really re-evaluate your existing processes because you do not want to implement an expensive technology solution to replace a process that has been in place for 20 or 30 years. I don't want to make an unnecessary assumption that it doesn't work properly. That's why you're moving towards a supposed technological solution.

Finally, you have your portfolio manager or administrator. We have PricewaterhouseCoopers there because this is a service that we provide to clients.

There is also the application architecture. I just want to discuss some of the integration points. From an integration point, PricewaterhouseCoopers doesn't just come in and put a computer system together. That's what we've been told a lot of times. We really help you put the metrics together, and, in an integrated solution like this, you have performance measurements now. What was it like before? You have data available to you to measure your business today. What were your sales at 2:00 as opposed to 4:00? I use that example just to show you some real-time information that's available. You could do a return on investment or you could perform process improvement. We look at the existing processes, and we hopefully use best practices from other clients that we've seen work for them; maybe it will work for you. On one side, you have knowledge management. Do you have an integrated system? You have a whole database of information on your customer that you can use. What are the customers demanding, and what are they not demanding? You have process improvement and you have some of the customer touch points. You have the Web, you have a call center, wireless financial institutions, and agents. These are the channels that you use to bring in the business. You have customer services, a customer management group, core applications, and back-office infrastructure.

What's the business strategy in these three components? A client would have a lot of choices to implement this model. They can elect as much of the integrated solution as necessary to either compliment their existing infrastructure or replace their existing technologies and processes. There's a front office component, which

includes a lot of your customer facing activities. You want to do business-to-business, companies selling products and services to other companies via the Web. You have your core applications that you might want to support, like back office, financials, HR, statutory reporting functions, and so on. Then you have your systems components.

So who's going to use this? Who would spend the time and energy right away to do this? Given today's competitive e-speed business, speed to market is very important for any company. A virtual solution will help a company to become an immediate insurance company. This company probably has little or no existing infrastructure. We can put a solution set together to be rolled out in a very short period of time. In today's dot com era, we have a lot of start-up companies. These start-up companies don't have the money up front to spend on information technology, or they don't have the money to hire the IT folks. A company can, in essence, rent (i.e., outsource) the solution and have an immediate infrastructure to support an insurance operation. The start-up will focus on its core competency of selling the product that they're getting into business to sell. It will reduce some of their fixed expenses. In today's dot com world, there are a lot of companies that are unsuccessful. They can exit the market without losing as much money as if they had spent a lot of money to build an infrastructure, and then, six months or a year later, they go under. In this situation, they don't have to spend that money. They're not going to lose that much more money than they already have.

In conclusion, the customers are demanding e-commerce. Customers are much more sophisticated today, and they want instant gratification and instant results.

The regulatory environment changes. We have e-signatures now that make it easier for completing an online sale from a legal perspective. That's very important in insurance.

Insurance companies are seeking alternative distribution channels, and this is one way in which they can have an immediate presence, especially the smaller ones that don't have the financial means to set up something completely internal.

There is also affinity marketing. There are companies such as Nordstrom, Ford Motor Credits, General Motors, and GE Financial Services that have all this money and want to get into the insurance sales businesses. If I owned a car dealership, for example, people would get a loan from GM Credit. Suppose I want to sell car insurance to you, too. Maybe I can get a piece of the car insurance pie. Affinity marketing is when you have organizations with a large customer base that you can sell to.

Finally, there are the technology advances. Technology is changing everyday. As technology advances, it will make it easier and faster for companies to set up an insurance company and infrastructure.

Now, I'd like to introduce the next speaker, John Gibson. He has a case study on eCoverage.

Mr. John F. Gibson: My comments will be from a property/casualty perspective because that's the kind of actuary I happen to be. I think a lot of what I'll be talking about does head over in the life side and certainly in the personal life products. I want to acknowledge that this is a presentation that was given at the 2000 Casualty Actuarial Society (CAS) meeting by one of the actuaries at eCoverage so I borrowed the speakers' work with their permission.

The Third Annual Internet Insurance survey conducted by Booz Allen & Hamilton says that there is substantial opportunity for the right player, and the right ingredients, and bringing it together with an Internet offering.

The insurance opportunity in personal property and casualty products is very large at $150 billion. Estimates of online sales vary, although a Forrester Report estimates $14 billion in the online market by 2004. Any number of billions would be a lot of money in the eyes of the current carriers. Insurance customers are unhappy and frustrated. They want more but it's time consuming, it's complex, and it's difficult. The customer service is not good. Nobody is really doing customer service online today in a dominant way.

All of us know that if I wanted to buy a book, I could do it online. I think everybody would go to Amazon.com or some of the other sites that have come along. Some 84% can name a Web site to visit to buy books. Auctions, music, and software, are things that the public would know. On the other hand, only 15% are able to name a Web site related to insurance; therefore, online insurance is wide open for the insurance industry.

There are barriers to entry that we've talked about. There are state-by-state regulations that have to be dealt with. It's complex. The pricing has to be dealt with and traditional insurance companies are slow to move because of their internal agent conflicts and technology. The perceived need for human involvement in sales and underwriting is in contrast to many of the other areas like mortgage loans, stock purchase, mutual fund buying, and all sorts of financial transactions that had this same perception. I would put forth that human involvement is not as necessary as we might think, but certainly that does hold things up.

Traditional insurance companies are beginning to utilize the Web. We talked about that. They are either just providing information, all the way up to quoting their own business on the Web with companies like Progressive and Allstate that have that capability online and anywhere in between. For the most part, Web utilization is still within the context of traditional agency structure, and not obviously trying to compete against the writers using different distribution channels. There are also insurance marketplaces and the aggregators, like Quicken Insurance and InsWeb. There are aggregators on the commercial side, like One Shield and some others, so these are growing as well.

I'll focus on the Internet-only carriers. Those are the people who write business directly with a customer. You can get a quote and buy the coverage right online. Those carriers view the Internet as more than just distribution. It's an entirely new way of doing business. They are both selling and servicing the products in a whole

new way. It changes the paradigm of control in the purchasing process; it puts it directly into the hands of the consumer, with no middle process in between. This applies whether the transaction is done through an agent or directly with the insurance company.

Some examples of Internet-only carriers are eCoverage, which I'll discuss, e-Policy, which provides some limited commercial binding ability, and Esurance, which is another personal lines writer. Esurance is writing in 29 states for personal auto, and it has plans to extend into other lines of business on the personal side.

Our topic is eCoverage. It was formed in June 1999. It is based in San Francisco. This was really my first experience with any sort of a dot com company. The company is in kind of a townhouse. Everybody seems to come and go at various times, even in the middle of the night. They all have dogs. We call it a ponytail and earring kind of place, so it's pretty cool. The company sells personal auto online in California. It started that in September, and is now offering the product in 31 states. It plans to take this into 40 or so states by the end of 2000 as the filings that have been made are approved in the various states and then implemented in its system. It is backed by some pretty impressive people. It came out of the same group as Softbank and the other investment venture capitalists that formed e-*trade and e-loan. The idea is to have a suite of financial brands that consumers can visit and get any of these products through the entire array of financial services.

Who is eCoverage? It is an Internet-based company, and it makes every aspect of the insurance efficient and easy from quote to claim. It wants to own the whole process. It is all about speed and the convenience of self-service transactions. It makes the purchase of auto insurance simple. As Vic said, everybody has to have it. It's certainly not something that many people understand and can do. It lays out both the language and the Website and how they can buy it in as simple a way as possible.

There is also savings because there is no middleman or processes. The savings that might be in the personal lines is certainly open to speculation, but it could be as much as 50% if you eliminate all of the things that occur in the way insurance is done today.

Finally is service. This is one of the things that distinguishes eCoverage in its approach. It isn't as if there aren't going to be people. There's going to be high-quality service, especially when it comes to the claims and online relations. You can chat with people online at any time about your coverage or about your claim, and you can access the customer service people by phone 24 hours a day, seven days a week.

The business model that eCoverage has set up is a little different than Esurance, which is really just fronting for someone else. It is not really a carrier. eCoverage is a modified general agency (MGA), and it writes through an issuing carrier, Security National, which is a company of Royal Sun Alliance (RSA), its shell. It has a captive reinsurer in Hawaii, so it has a piece of the risk. The reinsurer, both RSA

as well as other brand named reinsurers, take the rest. There's a sharing going on here and eCoverage is in for not just the commissions from the front-end process but the actual profitability on what is written. It is a very aggressive advertiser. It patented the phrase, which is "the industry is history." It is advertising. It advertises in the Chicago area. Its offices are in San Francisco; it has an almost life-sized mastodon that it uses to represent the industry as it is traditionally known. It is, of course, changing that perception. It is very aggressive, and even somewhat offensive, in terms of where it is going within the industry and what it thinks it can do.

It is completely overhauling traditional insurance company processes. It is building the company around technology and the business practices of the Internet. Just like many of the dot com companies, eCoverage came into this area as a technology solution. It had people who knew how to do that. I have met them, and they are some of the brightest technology people you'll ever run across. They're all young. Everybody is under 30 and has spent years building Websites for Apple or other companies. They are very knowledgeable and aggressive and building it all around the technology.

The company is also staffing it with innovators from within and outside the industry that want to break the mold. They do have some insurance experts, but even these are people who are willing to look at things differently and do it in a whole new way. That can only work if you have the proper platform to bring it off. You can't just dream something and do it if there isn't a platform.

There are three key areas where the company has to have ownership. One is the technology itself; the second is the customer's experience; and, the third is the product. In terms of technology, it has developed this technology entirely in-house. It has filed seven patents on the technology. There is exceptionally flexible product business development. They have data quality, accessibility, and just for the actuarial folks, there's no APL spoken there. It is shocking but true. They consider APL a dead language. I don't know how that can be.

Most insurance companies have pretty static environments for their systems. This is a company that expects to be able to process all of the transactions on an online real-time basis. It can do anything it wants at anytime. Those of us that have grown up with more traditional systems find that hard to believe. Regardless of how large the database is, why couldn't the database be refreshed instantaneously so it is available to do things all the time? I'm more from a transaction-based approach, and that's definitely not the way this has been built.

The customer experience is also critical. They take responsibility for the customer experience from quote to claim. They have licensed non-commissioned professionals available online or by phone 24 hours a day 7 days a week. They also have these really interesting looking rapid response vehicles. It is not unlike what Progressive does. The vehicle happens to be a purple and yellow Extera. It's a little bit like the difference between how Dell and Gateway used to be. If you wanted to buy a computer, Dell and Gateway were the online choices. Dell's story was, if it broke, they would have somebody out to fix it the next day. Gateway

didn't have that. That's not necessarily true today. ECoverage wants the claim to be easy, and it wants somebody to show up at your door and give you a check. It branded that whole approach.

The product area is where actuaries had the most influence; there is a unique sales environment. You're dealing with getting information online from a customer who might not be completely knowledgeable and might actually want to do something in a way to get the lowest possible price and not tell the truth. I think that's called fraud. You have to guard against that. It's a unique sales environment that brings challenges.

The current industry products have agents who are going to ask the questions. That's not without it's own set of problems, as I'm sure we all know. Agents aren't always up front about what they might report or ask. But it is different, in that there's a different person involved. eCoverage built a proprietary product that's designed exclusively for sales over the Internet. We went through a lot together. The actuarial group really tried to focus on the auto product and ask questions that maybe hadn't been asked in a while.

What's the best way of doing things? Is this a real important data element? A good example of this, which was already mentioned, was the idea of mileage. We'd all agree that mileage would be the best measure in the auto business. How much a person drives is the best way of rating somebody. It's better than gender. We can't get that information with accuracy because people either don't know how much they're going to be driving or they just make it up. If that were available, it would certainly help. If you ask people to give you the mileage of their car on the Internet, they will actually do it. This is an interesting phenomenon. If you ask for the mileage on the car, and then a year later you ask them again, most people will actually put the number in there, as opposed to asking, "How many miles do you drive in a year?" That's just a simple way of getting the information. We were looking at a lot of different things. A very complicated process in auto rating is driver assignment. Who's driving the car and how many miles are being driven? There is another way to make your policy look different than what actually happens in the world of auto insurance. We had to go through a process of figuring out how to do that.

Superior understanding of the data facilitates continuous updating of the process so underwriting has to occur on the front-end of this product. Some amount of underwriting can occur later, especially if somebody is fraudulent and there's a need for a signature. But the intent of eCoverage is to mine these data continuously and to look for what it is that needs to be priced differently or underwritten differently or removed from the books because of the way that this performs. It will not necessarily be traditional analysis. For example, studying the click pattern is one way to evaluate how a person goes through the site. If you have gone through the site, repetitively reassigning things to try to get a lower rate, that indicates a pattern of clicking that might show you that you have more inclination to be dishonest than somebody who goes from one site to another site.

As for privacy issues, the reality is you're on the Internet. We're not talking about necessarily getting your credit report without your knowledge. These are things that are going on while you are at the site. That data can be used, but there are other sorts of data elements.

The quote itself has 16 questions. It's simple. A one driver, one-car application has two pages of information. You can buy the coverage online, get your proof of insurance cards online, print them on your own printer, and make changes and renew the policy online. Then you can go on to the claims process again. It's done online or by phone. The purple Extera will show up at your house. You can find out about your claims status all the time. Again, this is one of the keys to eCoverage as compared with some of the other sites. They're trying to keep it simple. People will not fill out the 33 pages of information on InsWeb to get a quote. They just won't do it. Those of us who are on the Internet all the time can relate to that. I have a certain tolerance for how much time I'll even let the little hourglass be on my screen before I'll stop and do something else. It's a matter of filling out five pages for four vehicles versus 20 or 30 pages. There are fewer questions than there are at some of the other companies where you can get insurance.

What are the actuaries doing? There are actuaries at eCoverage. We work with them, to some extent. We work in different areas. These are things that you can take with you to help you in the business of e-commerce. The corporate structure itself, such as who is going to take what risk and the proportion of the risk to take had actuarial involvement. Actuaries are involved in the design of the product, of course. I mentioned rethinking the whole way of going at the product. There is actuarial involvement in the business plan itself. Actuaries look five years out to try to predict how many policies would come in the loss ratios, and they present that to investors. At eCoverage, actuaries do rapid product filing. eCoverage was trying to get into all these 30 states within 60 days, and it takes a lot of actuaries and a lot of folks working on that.

Another area in which there are actuarial opportunities is automated underwriting. We're getting more into the various pieces of information available and what you can do. We are also paying attention to the regulations and privacy. Actuaries should be all over this to assist. Data mining is a similar area in which you squeeze out the last ounce of information from what's there. This is done not only for underwriting, but also for other related things, whether it is marketing or something else.

Other actuarial opportunities exist in new products. There are a lot of new things coming. eCoverage is planning to enter the homeowners and life market as they move along. There will be the need to look at those products as time goes on.

Liability is created by working on the Internet, and actuaries need to help design products to price that liability.

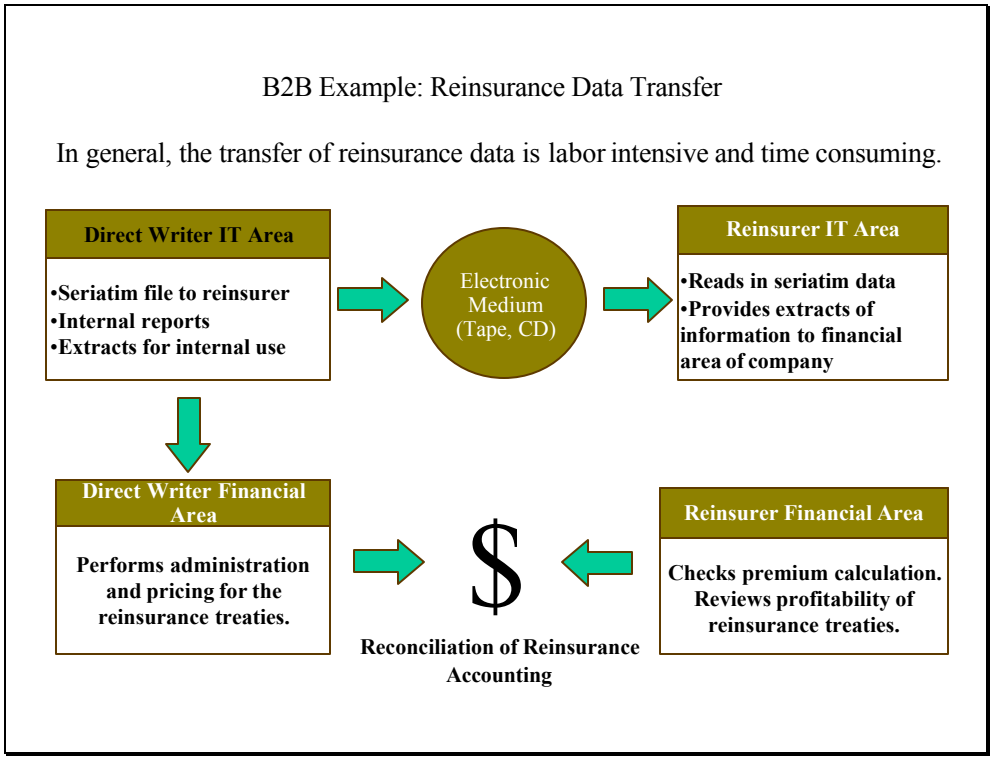
Mr. Howard M. Auerbach: It seems to me that once you're on the Internet, you have to be really careful about fraud. You need strong encryption. I've never heard anyone talk about sophisticated hackers.

Mr. Erkis: I think security is obviously a very big issue. I know that a lot of people are worried about transferring information. The Actuate product that I talked about is being used at a very large investment banking firm, and it has very sophisticated security encryption. There's no way that I could even describe it to someone. But security is a definitely a very big issue.

From The Floor: You said there were some successes on life insurance side as part of your brief remarks. Can you just describe them, without naming them? What do you mean by successes? It hasn't really been successful, but you said there were some successes.

Mr. Erkis: There are companies on the Web that have a successful strategy. I've heard people make presentations from the Hartford and from Allstate who feel very comfortable with their insurance distribution channels, and a lot of the successes are more transitional. There aren't a lot of sales on the Web in life insurance. That's just a fact. We have regulatory barriers. There are other things that we're having trouble with. When I think about successes, in my view, I see companies that have an online strategy that makes sense in its overall business strategy. They are also out there implementing it. There are definitely some successes there. Like I said, I think Hartford and Allstate are two good examples. There are probably many others.

CHART 1



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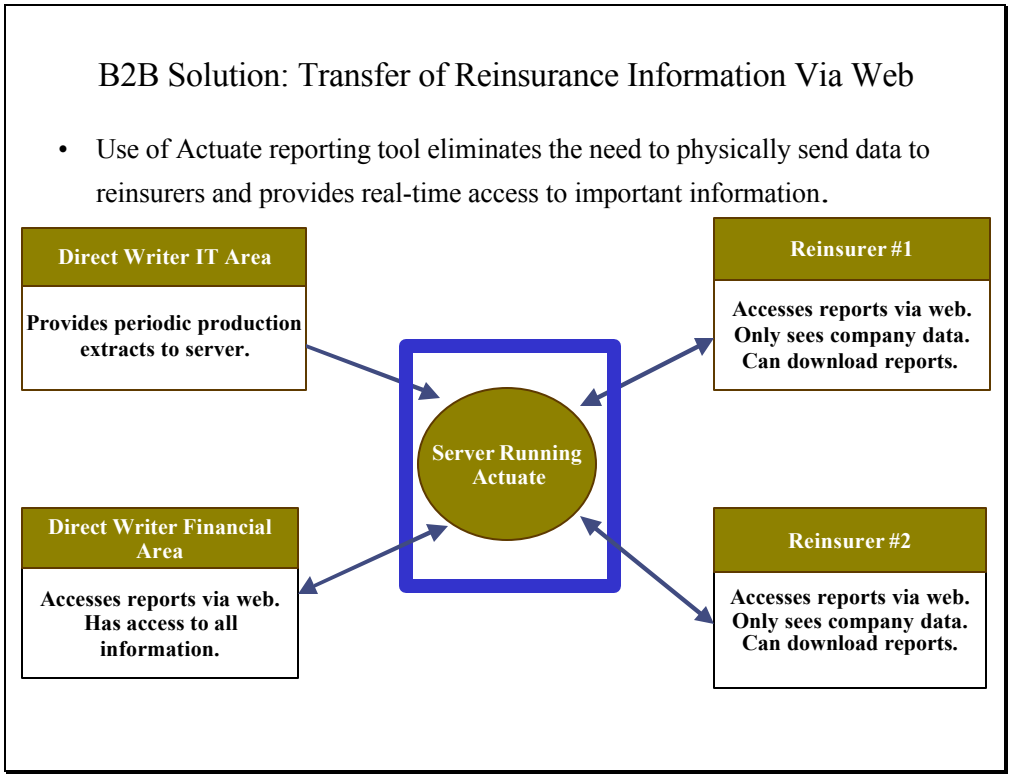

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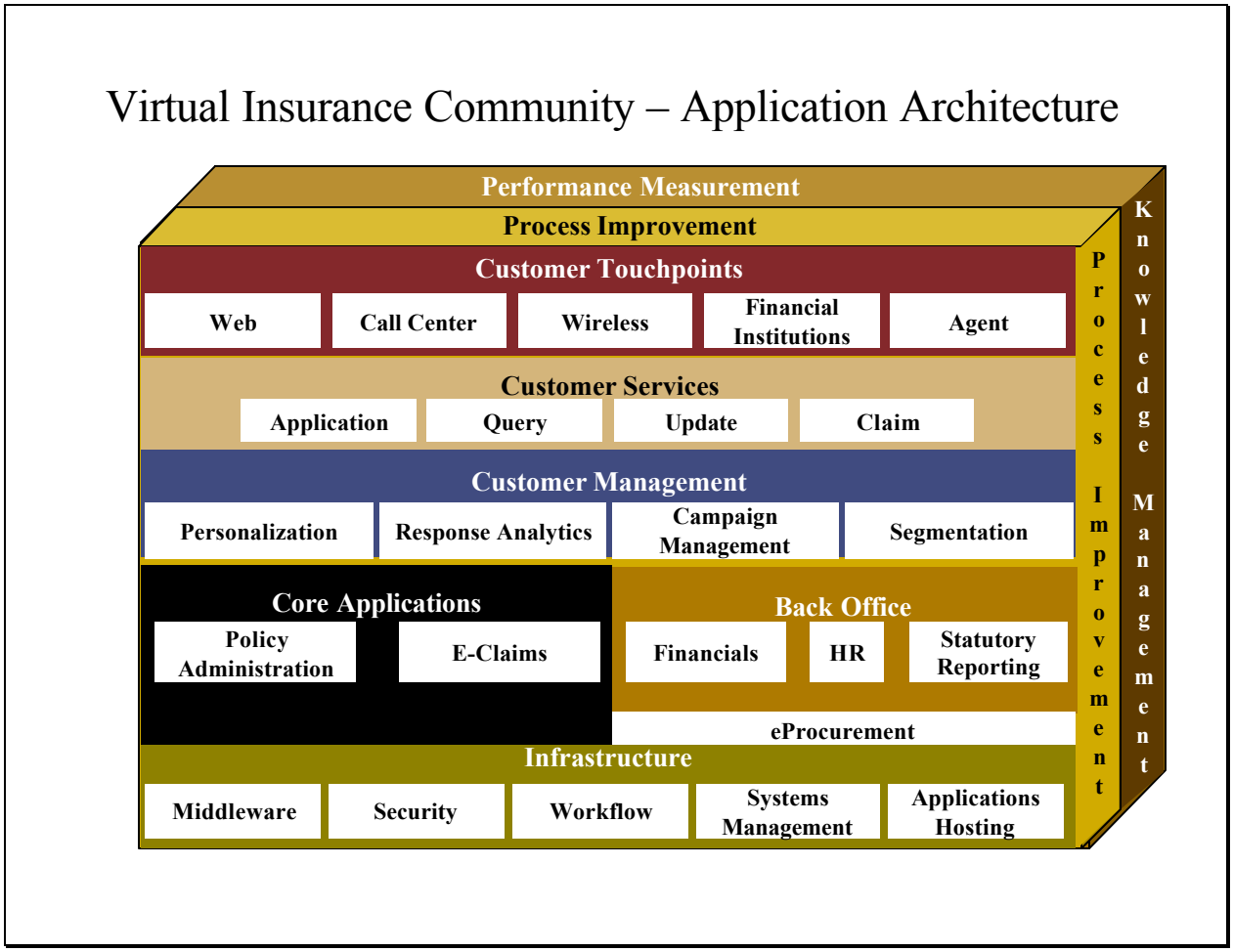
Virtual Insurance Community – Application Architecture
Performance Measurement
Process Improvement
Customer Touchpoints
Web
Call Center
Wireless
Financial Institutions
Agent
Customer Services
Application
Query
Update
Claim
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Personalization
Response Analytics
Campaign Management
Segmentation
Core Applications
Policy Administration
E-Claims
Back Office
Financials
HR
Statutory Reporting
eProcurement
Infrastructure
Middleware
Security
Workflow
Systems Management
Applications Hosting
Process Improvement
Knowledge Management