RECORD, Volume 26, No. 2*

San Diego Spring Meeting
June 22-23, 2000

Session 43PD
E-Commerce Series: Underwriting on the Internet

Track: Nontraditional Marketing

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Summary: E-commerce and underwriting addresses the impact of the Internet on insurance sales. As the Internet becomes a more important tool in the marketing and issuing of insurance, product design, pricing, and delivery must evolve to address changing market needs. Underwriting and data collection will be key areas of change. How will the face of underwriting change? Will companies use the Internet to collect data that an agent previously collected? How reliable will the data a customer supplies via the Internet be? How will the industry change as direct marketers and companies with agents use the Internet to make products available to the consumer?

Mr. John B. Yanko: This is the third of five sessions. At the conclusion of this session you should gain an understanding of possibilities for insurance sales and underwriting on the Internet.

Our first speaker is Maureen Zupan, a management consultant with DataExecutives International, Inc. in Wayne, Pennsylvania, specializing in strategic technical planning for insurance companies. She has 28 years experience in the insurance industry in systems, policyholder service, underwriting, issue, and claims. She previously worked

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with Mutual of New York as a vice president responsible for underwriting, issue, and claims. She is a Fellow of the Life Management Institute (FLMI) and is a graduate of Hobart and William Smith Colleges. She will cover the future.

Our second speaker is John (Jay) Gallo, general director, at John Hancock Life Insurance Company. He is responsible for service and operations for John Hancock's long-term-care products line in Boston. Previously, he worked with John Hancock to redesign new business processes and introduce expert auto decision-making for life products. He built Hancock's operation for direct-to-consumer business, an Internet term. He has a bachelor of science degree from Annapolis and an M.B.A. from Boston College.

Our third speaker is Deb Schmidt, a consultant with Milliman & Robertson, Inc., where she specializes in management and strategic consulting on risk selection issues, training, audits, new product initiatives, and underwriting. She is also a Fellow of the Academy of Life Underwriting and is a graduate of Central Connecticut State University, and has an M.A. degree from Trinity College. She will talk about actuarial challenges.

Ms. Maureen C. Zupan: My task is to talk about the future. Where are we headed with e-commerce and why, and how is it going to affect insurance companies and underwriting in particular? Let me start with a quote from the *Meta Group Report*, August 1999: "Insurers are rushing headlong into e-commerce initiatives. The problem is, they have been schizophrenic about creating electronic business strategies to support those projects. Insurance companies are like kids in a candy store. They don't know where to start."

In the 1980s, leading edge companies concentrated on using technology to improve the quality of their services and products. In the 1990s, they concentrated on re-engineering their processes to be more productive. In underwriting in a new business, this re-engineering has included use of technology in several key ways in the most forward-thinking companies. Mobile virtual offices are being developed for agents using automated integrated sales tools from prospect digging all the way to application (app) generation.

While most applications are still on paper, they are typically short, carrying mostly nonmedical identifying information about the proposed insured. This is keyed into a computer system and handled electronically. The more advanced companies are taking these short forms directly on a computer.

Once the application is submitted to the home office, the remainder of the information is gathered directly from the applicant via telephone by a trained home office person or a third-party vendor. The questioning is supported by a computer system smartly asking additional questions as the applicant makes his or her responses. No longer are the same questions asked by the agent, the home office interviewer, and the paramed vendor. They are asked once and the questions are captured electronically as answered. Expert systems are being used, but many companies are struggling between hope and hype of these systems and the difficulty of implementing the most robust systems.

Companies are having mixed success with imaging, another technology still evolving. We all want to get rid of paper. Image is the answer, but as with expert systems, it is complex in implementation. Underwriters are using the Internet to research medical questions and companies are beginning to use it to sell insurance. Extranets are used to link vendors and insurance companies, and intranets provide agents with forms, marketing materials, and competitive information.

E-mail is pervasive. It is used to communicate internally, to alert agents to case status, and to transfer information between insurance companies and their reinsurers. There are dozens of uses. Underwriters who thought it was unprofessional to turn on the PC on their desk are now using word processing, spreadsheets, presentation, and database tools on their desktop PCs.

Today, there is a concentration on using technology to be more productive. My strong belief is that in this coming decade, businesses must concentrate on using technology to speed up their processes and to provide universal access to information. E-Commerce is the center of the next revolution.

Companies that provide world-class service today, like Land's End for consumer goods and USAA in the financial services industry, are able to do it because they understand their customers. They are adaptable to the changing needs of their customers. They ensure continuous improvement within their organizations; they provide responsive, reliable, and seamless service. That service is personalized, and as an organization, they have set a specific service strategy with service goals and objectives aligned and linked with corporate goals and objectives. They understand customer service is the primary value-added function in any business.

How do they know their customers? How do they stay close to their customers? How do they ensure their organizations have a culture of service? What does it take to become a truly customer-centered organization, especially for companies that have not made customer service a priority until now?

At the core, it requires a fundamental shift in the corporation from a culture of operational efficiency to one that is focused on the customer relationship. It is one that understands and delivers on customer needs for convenience, accuracy, and efficiency.

When managers talk about the value of these customer relationships, what they really mean is the value of the proprietary information they have about their customers and their customers have about the company and its products. Armed with information, companies can focus on improving customers' experience across all their interactions. They can streamline processes that impact customers. They can let customers control their own interactions with the company, allowing customers to save time and aggravation. They will allow the customer to reach them whenever they want to and however they want to, whether phone, Internet, e-mail, or snail mail. They can truly provide personalized service. All along the way, they can capture more information about their customers' needs, wants, and desires.

In truly customer-oriented organizations, this information is accessible to every person within the organization. The information is the glue that holds together the structure of these successful businesses. I am going to repeat this point with another observation.

Until recently, we designed computer systems to deal with everything but the customers. Customers were an afterthought, dealt with in bulk. For example, via efficient billing systems all customers from the multi-million dollar insured to the insured who purchased a single burial policy received the same bill. The key today is to put the customer at the center of the company's information technology (IT) infrastructure.

For a company to become truly customer-focused, the focus must be on the customer. Customer service must be embraced as a primary value-added function in every business. Information must be easily accessible to everyone who touches the product in any way, from the customer to the vendor to the company employee to company management. While customers search for the highest product and service value for their money, their urgent desire is to reduce time they waste in their daily routines. This, more than anything, is driving the revolution in how buyers and sellers do their commerce.

Speed rules. Speed of doing commerce digitally appeals to companies' most profitable customers—the cream of the crop. Digital speed is infectious. Once you know you can have something now, you will want everything now. There is an added benefit for companies. Being faster than your rivals makes you more profitable.

For example, claims representatives from the property/casualty company Progressive perform their inspections right after an automobile accident. I am sure you have seen the vans with the word Progressive on the side. This speed generates substantial savings for Progressive. Because cars get fixed earlier, they have lower storage fees and rental car fees.

This need for speed, both because of customer demand and because it reduces company's expenses, will drive companies to adopt digital processes across all processes. Our expectations as customers and members of a business community are changing. We are beginning to adapt to a digital world and have come to expect benefits of speed in all aspects of our world. We want and need more information to be successful in our personal and professional lives, and we want it all to happen faster and faster.

How is technology responding? In many, many ways and across many, many fronts. I am not going to go into what all these are, some of which are in their very early stage of development. But there are two I want to talk about.

Radio frequency identification will likely replace bar codes. Companies have developed technology that allows antennas to be printed on paper. Technology now allows a chip the size of a coffee ground to be attached to that printable antenna and carry data that are updateable. Right now, it carries about 130 characters of data. Picture, for example, instead of bar codes, this chip and antenna on every item in a store. You go in the store, gather everything, and you walk out the door. As you are walking out, this radio frequency is picking up this antenna information from everything in your basket, totaling it up, and automatically charging it to your credit card. No more checkout.

If you search the Internet and you think you know it well, you have not seen anything yet. In the future, everything you do, from setting your alarm clock, to making breakfast, to turning off the lights at night will be captured on the Web. Data, text, audio, and video will be digital and available on the Internet. Every device and appliance you have will be connected to the Internet and communicating with each other, as well as with the Internet.

Companies will track you as you move across the Internet visiting sites, and in doing so will keep track of your preferences. Virtually every company will need to integrate customers into every aspect of their business and the Internet will be the unifying infrastructure. *USA Toda's* business section carried a story that stated, "A next phase in technology is emerging. One that will be deeper, more complex and more thrilling, say venture capitalists, entrepreneurs, and CEOs in tech."

It will also be harder. The Internet alone is not enough to carry out transformation of business and leisure so long promised. The next phase will mix the Internet with new and complex software, breakthrough discoveries in areas such as material science and lasers, and deep integration of technology with the real nuts and bolts world. You can today go out and buy a picture frame that actually is connected to the Internet and overnight, send pictures of your baby to your in-laws so that when they wake up the next morning, they can see the latest pictures of the baby.

What will these technologies mean to our professional lives? First, some generalities apply to all businesses. We are seeing the early stages of three fundamental business shifts, articulated well by Bill Gates in his book, *Business at the Speed of Thought*. Most transactions, he says, first between business and consumer, and then between business and business, will become self-service digital transactions. Intermediaries will evolve to add value or perish.

In the U.S., Charles Schwab, a major investment house, is doing just that. They are allowing customers to build their own home page and keep track of their finances in one place, even if the assets are not maintained with Schwab, with no fees and no obligations to do business with Schwab. They say in their ads, "We're leading the way in bringing the power of the World Wide Web to today's individual investor."

Second, customer service will become the primary value-added function in every business. Human involvement in service will shift from a routine low- value task to a high-value personalized consultancy on important issues, problems, and desires for the customer. Merrill Lynch began a major ad campaign last year with this new direction. "Your interests and our interests perfectly merged. You'll get open access to the resources of Merrill Lynch. The more complicated life gets," they say in their ads, "the more determined we get to simplify things for the people and businesses we serve."

Finally, the pace of transactions and need for more personalized attention, according to Bill Gates, will drive companies to adopt internal digital processes if they have not yet adopted them for efficiency reasons.

The Internet is allowing what economists call a perfect market to evolve for buyers and sellers as all things necessary for buyers and sellers to interact are being brought together. Let me talk about this just a little further. Once everyone is connected electronically, information can travel by itself. The traditional link between the flow of product-related information and the flow of the product itself, between the economics of information and the economics of things could be broken. People and physical objects are no longer needed to carry information from one place to another.

This is what is truly revolutionary about the explosion in connectivity. There is the possibility it offers to unbundle information from its physical carrier. This differs from the majority of buyer-seller relationships today, such as in the insurance industry, where a salesperson or a piece of direct mail carries information. In that mode, information goes where things go and no further. In any buyer-seller relationship, information can determine the relative bargaining power of the players.

Auto dealers know the best local prices for a given model. Customers, unless they invest a lot of time shopping, generally do not. Much of the dealer's margin up until now has depended on asymmetry of information. Not only does this information define and constrain the relationship among various players in the buyer-seller relationship, but also in many businesses it forms the basis of the competitive advantage. The car dealer uses it to put the buyer at a disadvantage. In an efficient buyer-seller market, like the Internet, all this changes. You get the basis of what economists call a perfect economy. All entities have full knowledge of prices and they can easily find the best deal.

The Internet is changing the paradigm with commerce in another way too. It allows you to link up with a large enough group to get bargain volume prices, for household items, hotels, and airfares. Without the Internet, there would be no way you could have time to find 100 friends who want the same refrigerator. There is a Web company, Mercata.com, that negotiates buying discounts. They have about 150 manufacturers with worldwide reach. As each additional person registers to buy an item, the price for the item goes down incrementally until the predefined date and time when everyone gets that lowest price.

The communication of "rich" information, to large audiences has been limited by the cost of providing such information. By "rich" information, I mean information that is large in amount, customized in presentation, and interactive. The sales presentation in insurance is such an example due to its required proximity and dedicated channels with its high costs and physical constraints. The insurance industry has required agents to work predominantly one-on-one with customers. Conversely, the communication of information to a large audience has required compromises in bandwidth, customization, and interactivity. This pervasive trade-off has shaped how customers communicate, collaborate, and conduct transactions internally and with customers, suppliers, and distributors.

The emerging open standards of the Internet and the explosion in the number of people and organizations connected by networks are freeing information from channels that have been required to exchange it, making those channels unnecessary and uneconomical. In the past, a sales force, a system of branches, a printing press, and a chain of stores served as a formidable barrier to entering industries because these took years and heavy investment to build. In this new world, it could suddenly become expensive liabilities. New competitors on the Web will be able to come from nowhere to steal customers.

In the future, customers will force you, and technology will allow you to target the right customers. These will be the customers with the greatest influence on the decision to purchase your product. You will be able to own the customer's total experience, provide a 360 degree view of the customer relationship to everyone in your organization who deals with a customer. You will let the customers help themselves, foster community, and deliver personalized service.

What does this mean to underwriters and to you as actuaries? In the past, underwriting has always been about knowledge and protecting mortality. I believe it will soon be almost entirely about service, and if we do not recognize that we are in the business of providing a service to our customers, whether you think of your customer as being a producer or policyholder, our management is going to find someone who does.

To provide service, insurers will be linked electronically with customers, agents, medical providers, and labs. Agents will work from these mobile virtual offices with automated integrated tools. There will be call center technology, Internet-based solutions, image, and workflow systems. Legacy administration systems will be replaced with client server or Web-based solutions. Client management and marketing will be supported by enhanced customer databases.

E-business will transform the insurance industry in several ways. The balance of power will shift from the sellers to the buyers. Knowledge of price disbursement will mean lower prices and margins. The organizational structure of the industry will change and there will be a profound impact on the distribution system.

Buyers' power will lead to lower prices. Informed consumers will question pricing. Pricing information disseminated to the general public and innovative third parties will provide comparative quotes on standard products. We are seeing that already. It will mean an avalanche toward product standardization and open quotes. Comparative pricing by customers will require skillful underwriting, as price reductions put pressure on margins. With extensive information gathered on consumer behavior and attributes, innovative companies will be able to cherry pick the best customers from other companies who are trailing behind.

The Internet will allow companies to reach new markets and create new ones. Underwriting will become a blend of telemarketing and teleunderwriting. Underwriters will be marketers, information gatherers, and risk analysts.

Direct customer interaction will be the norm. Electronic Attending Physician's Statements (APSs) will become real. There is a Web site called "aboutmyhealth.com." If you want to go out and see what the future is going to look like relative to that and your personal life, I suggest you log on. Expert system technology will mature; there will be call-center technology that will become second nature.

The underwriting professional will evolve along two paths. Life risk managers will be marketers, deeply involved in the insurance sales strategies. Technical underwriters will be knowledge engineers, providing continuous research and analytical support to the expert systems.

I want to finish by saying I am concerned that our industry and our profession does not understand what is ahead of us. A recent Conning & Company study reported on what insurance Internet sites need to do to be winners. They have to provide superior quote generation capabilities, high performance, and economies of scale. They cannot simply be using the Internet to generate leads. They cannot expect customers to visit their sites without compelling reasons. Yet, because insurance companies fear channel conflict with their existing distribution channels and they worry about being judged solely on price, they are not using the Internet successfully. Only 1% of insurance company sites offer interactive customer service or online sale capabilities and only 7% offer quotes.

The big issue is to facilitate marketing and do basic customer support and provide information. A recent Tillinghast-Towers Perrin article reported that three-quarters of the insurance executives that were surveyed see the Internet emerging as an education and service vehicle, providing product and account information and facilitating routine service. But three-quarters of banking and investment executives believe the Internet will be a major channel for sales. The motto of the Web site called "e-coverage.com" is "The industry is history."

Where are those of us who work in the mainstream old-line insurance companies headed? Where are we headed as Internet sites like Quotesmith and Insweb that did $30.6 million in revenue in 1999, three times more than they did in 1998? Where are we headed when they are on target in 2000, again geometrically increasing their revenue? How will we use the Internet to sell, to improve our processes like underwriting and to survive? Jay's going to give a little hint in talking about underwriting in e-commerce in today's environment.

Mr. John Gallo: Let us talk about underwriting and new business processing on the Internet today. I want to start with a quote from Colin Devine, who is vice president of equity research and life insurance at Solomon Smith Barney. "While the conventional industry marketing wisdom has always been that insurance is 'sold, not bought,' we believe the ability to purchase simplified products in a straightforward, yet individually customized way over the Internet, from a highly trusted brand name such as John Hancock, will fundamentally reshape the way life insurance is distributed." From our perspective, when Mr. Devine uses the word simplified, we are not talking about simple low-faced products. We can simplify products up to about $1 million in face amount.

Let us talk about Internet and online insurance growth. We will talk a little about John Hancock's experience on the Internet. We will then move to some expense management and application process discussions, and then we will wrap up with a discussion about placement rates and then some product design.

Let’s discuss Internet users versus term policy buyers by income band. There is a very favorable demographic trend. Why? We believe, from an income perspective, people who buy term insurance also use the Internet. This leads us to believe Internet buyers who might need insurance will be willing to use the Internet to make their purchase.

The Forrester Research report shows the anticipated growth of online insurance is rather phenomenal.

Now there are caveats. First, it is a projection, and it is pretty far out. But also, the growth is not just life insurance; it is for all insurance products. When you look, it leads us to believe the risk is not in doing something but in not doing something. If this does hold true and you do not have an Internet strategy, you place your company at risk of customers going to an organization that does have an Internet strategy. Even if you are unsure about whether or not customers will purchase over the Internet, and what that long-term future is, as a defensive position, you need some thoughtful plan about how you will participate in e-commerce and how the Internet will support your business model.

At Hancock, average coverage and premium is growing. Internet buyers are spending more and buying higher coverage amounts. If you were to look at John Hancock direct/internet profile, you would see nice positive growth in both coverage and premium with Internet tracking our overall business. For Hancock this is very positive. It shows the Internet has a potential to serve as the purchase vehicle for larger face products and not just for lower end, small face insurance.

At John Hancock, we tried to control our growth to about 75% compounded annually per year. For us that is a realistic growth pace we can manage adequately. We are very pleased with the Internet business through aggregators. The telephone-based direct-to-consumer business really dominated. As the Internet became more familiar, we saw a shift in our business towards the Internet. That is a great trend, and we are pretty excited about where it is taking us.

Where do we see the Internet going? There are three distinct waves of e-business that will sweep the global marketplace. Wave one is about near-term performance enhancement using the Internet. Basically, it is about cost reduction. In wave two, the Internet is enabling business transformation and a shift to what we call customer-centric businesses, as Maureen stated earlier. In wave three, businesses are reinventing themselves in an entirely new way and forcing some industry realignment. Wave three is seamless integration, virtual and physical marketplaces. Most are in wave one. There are a couple companies in wave two. There are no insurance companies in wave three.

Just to put it in perspective, a wave three company is something like eBay or priceline.com. Those are organizations that have fundamentally changed the way of doing business. They have introduced something. It is not a matter of, "How do I take something I do in the home office, field, with agents, or other distribution channels, and move it to a new medium?" They have actually taken the new medium and figured out things you could never do in another place, and that is what they have done with their business models.

At Hancock, agents or intermediaries will use the Web to facilitate the sale and service of products. All customers, whether they are consumers, producers, or intermediaries, will use the Web to conduct business. For us to continue to compete at Hancock, we need to continue with our aggregator partnership strategies. We need to develop enhanced online experiences, we need to seek that common engine or process that allows us to do true end-to-end processing. We need to continue looking at how to simplify the offering of e-products. We need to sell online because only by selling online can you understand and learn what the consumer is doing on a first-hand basis.

There is no substitute for first-hand experience. You can read a lot about what someone else is doing, but it is very hard for someone to tell you what real experience is. And if they found out something very interesting or unique, they are really not going to tell you. The only problem is it costs a lot of money and you need a lot of fortitude to jump into this game if your whole organization is not behind it and does not see it as part of a corporate strategy.

What is so great about the web? The web is a place where you can do low-cost transactions. You can convert from face-to-face interaction to customer-to-computer interaction, and that takes customers into a place where they are standardized or commoditized. The challenge here is how do you let the customers feel they are going through some sort of individualized or customized experience, even though they are really going through a very standard process? At this early stage, people are trying to solve marketing and sales problems as well as define working business models and underwriting models.

Expense management and profitability are usually not top concerns with companies that seem to have sufficient cash to support the extensive capital investments necessary to learn. If you look at today's costs on the Internet, they are higher than those of the traditional application pool from a processing point of view. That is because today, everyone applies for super-preferred rates, and that means we take everyone through the full tool of underwriting. We are looking at blood, urine, and almost everything for most customers. If you look at the traditional model where there is field underwriting, the agent has facilitated the customer and identifying where they will probably be underwritten. As a result, we do not do full underwriting on everyone.

As tools become more sophisticated, you will have real-time feedback with customers. As they start the application process, you will get back to them before the testing state and you will be able to tell them where you think they fit in the price spectrum. They can either agree or disagree to go on, and then you can start to eliminate some costs.

Expense management is all about fixed versus variable expenses. Today most aggregators receive some fixed fee for a lead. This mostly fixed expense model allows for greater profitability for most companies at higher ages and face amounts. Model risk can be optimized when you deal directly with a consumer and bypass the agent. Elimination of agents allows manufacturers to target highly profitable customers while limiting sales to unprofitable cells. Real-time end-to-end analysis of the buying segments allows you to understand profitability better and to target the right buyers with each successive generation of product you develop and deliver to the consumer.

Let us move to the application process. Today companies are experimenting with reflexive questions that explore health status, wellness, ailments, diseases, and lifestyle issues. Reflexive questions are still in their infancy. Based on certain pilots I have seen, customers will talk a lot about their health if the questions are easy to understand and the answers are formatted and standardized.

People do not like open-ended difficult-to-understand questions. Not only do they not like them, but they do not know how to answer them. When they do not answer them correctly, you have the whole problem you were trying to eliminate. You have to look at the product and process together, designing them in conjunction with each other for the medium in which you intend to interact with your consumer.

The challenge today is to create the right question set for your company, which includes how you underwrite and how you price products, so you can get the information you need in the shortest possible time. Our experience is you have somewhere between 15 and 18 minutes to complete the application process with your consumer on the Internet. Applicants seem to lose interest in anything longer than that. You do not get quality answers, and the model does not work.

What about the applicant's veracity? It is a big open pit right now. People are working on ways to test truthfulness in a real-time interactive conversation over the Internet. This is perhaps more forward thinking, but someone is going to figure it out. They are going to come up with some surrogates. The property and casualty business came up with some interesting things about how it processes its business. It might be a leader in this area around auto insurance and some other things. This will be a breakthrough point that really changes the model.

Privacy and authorization. Let us talk a little about the electronic signature bill. There is a bill that passed in the House of Representative on June 14 and the Senate approved it on June 16. President Clinton, if he has not signed it, will sign it. What the House bill talked about was both electronic records and electronic signatures. Not only can I sign online or give my electronic signature, but companies can also look at records and distribute records electronically, receive forms, and process business electronically. Passing the bill was the easiest part of the process. In some ways, legislation is slightly ahead of technology.

The hard part, or the heavy lifting occurs when people try to figure out what is the right standard for them. What does it mean for their business? How comfortable are they with processing electronic business? What does a customer need to have in front of them? What is the likelihood my targeted customer has that technology, knows how to use it, and can communicate with me? I do not think you are going to see very fast movement here. I think you are going to see a couple of people jump out, publish a big press release, and test some things. You will find it is in a very concentrated customer base. You might see it with companies where everybody in a certain organization has a certain piece of technology on their desk. As part of joining that company, they are trained on it. That might be a great place for people to start to experiment. You could see it around new hires in a larger organization.

A global enterprise might have hundreds or thousands of employees, They currently have to fill out forms and sign things when they become employees. It might be possible, as part of their training, to learn certain technologies. They are given authorization keys, so the ongoing business of running a business can be handled electronically for those employees. It is a big step to go to someone who is not part of your organization and try to figure out what technology they need, what you need, and how it is going to work. This is a great step forward, and it opens things for people to start to be creative and inventive.

What are we seeing today regarding underwriting decisions and real time? The only thing I have seen for real time decision-making is simplified products under $100,000. That is basically because most organizations seem uncomfortable issuing large face-amount policies based on questions and answers. For some simplified products, there is still third-party information being gathered in somewhat real time, and companies are doing credit and (medical information bureau) (MIB) reports in real time. There is still a need for outside verification or testing. I know of no one who is doing any type of large scale underwriting or large face underwriting in any real fashion. Everyone is still requiring for large face amounts a minimum of the full, either blood or urine profile.

Let us talk a little about placement rates. The lack of agent involvement in the Internet, if you are talking about a consumer model today, causes hesitant buyers to slip away. The challenge is, how do I learn to manage what I call a buyer-driven sales process? Companies know how to manage placement rates with an agent-driven sales model, but no one has really started to figure out how to manage placement rates with a buyer-driven model. This is going to become an issue for companies that seek profitability and not just a presence. My experience is many Internet-selling models see placement rates as somewhere between 20% and 30% below traditional channels. What happens is impulse buyers are drawn in by an ad or an article, but they do not stay the course and complete the process. I do not know whether that dropout rate can be attributed to just targeting the wrong customer or whether there is something wrong with the process.

The big issue, and we will talk a little bit more about it, is most sellers of insurance on the Internet have what I call a product process mismatch. This is very important. We take products designed for paper processes, and we try to jam them on the Internet. The reality is the medium needs to play a role in both the design of the product and the process. I think this is a big leap forward. It changes the whole way we think about designing a product. You cannot sit and not think about the Internet and have experience with it and understand how underwriting can occur or how an application process can occur. You have to bring that thought process into how you design your product.

I look back to when electricity was introduced. It was used primarily as a replacement for steam. If you look at the first 25 years of electricity, you'll see that there was no improvement in productivity in industry in America. That is because all we did was replace one source of energy with another. It took 25 years for a whole generation to die before people who were born with electricity started to figure out how you could use it in innovative fashions. That is when productivity took off for electricity. That is not to say you all have to die before we see Internet productivity and the product. Those companies that are first to figure out how to bring process and product together and redesign a product that is built around this whole new medium are the ones that will be out there first. If they do it well, they will make money before everyone else gets out there. Then people will be following them.

If you look at aggressive companies, they are out there right now. They are trying to figure out how to simplify the product process combination in a way that improves the quality of their business with the appropriate level of underwriting risk.

Ms. Deborah B. Schmidt: I am going to talk to you about the blue sky, Star Wars aspect of underwriting and the Internet. I think Jay has given us some real nuts and bolts about underwriting on the Internet. My job, and I am an underwriter, so this comes naturally, is to challenge the actuary. My challenge to you is to think about the changes e-commerce will bring to the actuary's role so you can go to your companies prepared with questions you will ask to make the most of this business and to make it profitable.

There are three basic things you need to be aware of when you begin to do e-commerce in insurance business. The first is there is going to be no more sitting in ivory towers. Underwriters, marketers, and actuaries are going to have to start cooperating from the beginning as Jay mentioned.

The second aspect is that for this new medium, you must have new products. You cannot jam the old term product into the Internet. There will be new assumptions. Third, everything is going to move much faster than we are comfortable with. The sources of information will be providing us with a flow faster than before. We are going to have to respond much more quickly than we have in the past. We will have to change our perspective on these various product points we have become accustomed to thinking about because, in different Internet models, we are going to have to make changes.

A year ago, life insurance companies were asked what use they planned to make of their Web sites. About 60% were planning to use the Internet in a very passive way. About 4% said they would be using the Internet for sales. Less than a year later, we saw a real difference in companies' approaches to the Internet and lots more talk. There is certainly not as much action as there is talk.

Because there are many ways to look at underwriting on the Internet, I have chosen three models to compare what the actuary might be doing along with the underwriter and the marketer in developing this business. The first one is called lead generator. The second model is using the Internet as the business acquisition tool, and the third is the Internet as the full business process.

The lead generator model is using the Web site as your initial point of contact. It does mean client-initiated business, business being bought, not sold, which is certainly a change. Beyond the initial contact, the conditional application completion in the traditional underwriting process takes over. Most product points remain the same as they would in traditional business. Some companies are beginning to use home office staff instead of agents as part of distribution, but basically the same assumptions hold that we have held for many years.

What we will see with lead generation business is as soon as it works, we are going to push those boundaries. In pushing those boundaries, there will be challenges to actuaries to study what is happening. What is the difference in results when information we get is not mediated through an agent? Is it better or is it worse?

Cost Benefits. This is one of my key points. We do not do enough study in the underwriting area of the value of the requirements we are getting. We look a lot at expenses, but those things shift rapidly and we need to keep this up-to-date. We cannot do it alone. This is an underwriting/actuarial partnership to get that information. As we are changing these models, it is a wonderful time to begin to change.

The third thing we will begin to look at when using the Internet as a lead generator and continue through the process is looking at verifying information and perhaps moving that process from the front end of the sale to after the sale. This is one of those changes in attitude we might have to consider slowly, over a period of time. Speed of response to the customer is going to be one of the driving forces. We might have to get some of our stuff later rather than sooner.

The second model is using the Internet as a business acquisition tool. The Web site is the initial point of contact. The Web site is where you collect your application data. In this model, you begin serious concerns about reliability of information. At what point are you going to verify it and who is going to verify it? Are you going to do it by telephone interview, or are you going to do it with an agent, or are you going to hire a third-party?
There is data from a Canadian company that collected information on the Internet and then followed up by telephone, which indicates they had a 70% hit rate of changes to answers when applicants were asked personally versus when they filled in answers on the Internet. I do not know how much of 70% was significant, but I think it is worthy of investigation.

Since the consumer is the one filling out our forms, we must change those forms. They are too long, too difficult to understand, and most of our customers will be very impatient if we do not look at what is important. How can we present it in a way that compels the right answer. The issue again of where to hand off the process will affect expenses you assume with this product. If you are going to do work in the home office, and if you are going to go to a paramedical exam, you will have to decide what is most important and where you can get the biggest bang for your expense dollar.

Another way this model might be used is work-site marketing or bank marketing. The client might be contacted through those sources and then uploaded into your

Internet arena to complete the beginning part of the process. You might see business coming in from both ways. The product points on this will change depending on how far you want to stick your neck out on the product. If you move to a simplified product with perhaps simplified acceptance mortality, then you can simplify your underwriting requirements and provide more rapid turnaround time.

The less you make those changes, the more it is going to behave like traditional business and the less appealing it will be to the type of consumer who likes to use the Internet to purchase things. The challenges to the actuary in this model are in the area of mortality assumptions. When do we decide we want to move away from those models we are using for preferred and finer slicing and dicing of our client base and begin to look more broadly at mortality?

The expense assumptions. If you are using both Internet access and perhaps an agent doing service on the back end, you might now have acquired the expense costs of both kinds of business. It could be more expensive than your traditional business.

Watch the benefit on your simplified requirements. Make sure you are getting value you need and make sure you are ready to reflect those changes in your product.

The third and last model is the full Monty, which means using the Web site for every type of communication with the client. This would include the initial point of contact, filling out the application, going back with follow-up questions through e-mail, e-mailing them their approval, and e-mailing them their policy with a digital watermark so it cannot be altered. To think about this process front to back, you need to be prepared with heavy-duty behind-the-scenes technology to do both electronic data verification rapidly and also to provide automated decision-making. You also need some expert system support to keep this moving swiftly. This process is aimed at the instant gratification customer, as Maureen said, "I want it now."
Our concerns are the concerns of earlier enhanced models. How reliable will this information be and how am I going to validate it? Here is where we have to be particularly creative. There are other underwriting tools than the ones we know and love. It is possible to underwrite without getting lots and lots of blood and doing paramedical exams if all assumptions you make about your product and your process are aligned. We might be looking at what other databases can be used to give information helpful to mortality in less than an instant. We need to make better use of data we already have on our clients and manage that in ways that are helpful for new sales.

I mention credit information here because there is one study that shows a strong correlation between your personal consumer debt and your life expectancy. I am not sure you want to do anything with this study, but it is an indication there are ways we can step outside what we have traditionally done and look for rapid ways to gather information.

The digital APS might, indeed, if we can make it come about, be a way we can respond quickly with more full underwriting information. If Internet sales open up an entirely new arena of individuals who perhaps have never purchased insurance before but now come to us through the Internet, an old friend like MIB is not going to be of use. We need to look at our tools and be open to new types. The extent and the effect of anti-selection, that is, who is lying to you and why, is a challenge. I do not have an answer.

The last challenge is the rapidity with which we will have to respond to changes in the market and business that will be coming. If you make a mistake, if there is something you do on your Internet application that allows a loophole somebody else is not allowing, it will happen very rapidly. Word gets around the Internet community, and you can be targeted before you recognize what is happening.

We need to gather data about what is happening and look at it frequently. There is no more of this 5- 10- or 12-year experience study nonsense. We ought to look monthly at what is coming in. When we start to see significant changes in mix of business, age of application, or any one of the number of factors we decide are important, we need to be prepared to make changes quickly.

The product parameters we looked at are very different from traditional business. The product might be simplified. It might have a limited death benefit, and it might be a very high-level face amount product, but it is not going to be the same product you sell today. The distribution system will probably be direct to the customer with perhaps some home office support for unusual questions. Your underwriting requirements will not be the traditional suite of requirements that are not for this business. Approval time, by definition, must be fast. What mortality assumptions will you use? Decide whether you start with simplified acceptance, guaranteed issue, or group mortality. These are all questions for you based on how your company sets up your e-commerce.

On expenses, Jay talked about this in detail so I will not, but I do agree we will see a shift from variable policy-based expenses to a more fixed-expense posture in this business.

Another thing we might consider in this full business process, now that we are out there getting questions, and I hope are getting better and better at questions and answers, is doing individualized pricing based on biological age versus actual age and instead of moving people into table B. The development of tools to verify data post-issue is a big arena for investigation.

I remember when the company I worked for moved to nonsmoker pricing early on. We really had no idea what we were going to get. We knew what the percentage of smokers in the population was, but we were not sure what the insured group was going to do. One of the ways we tried to manage was to believe people. After we issued, we went back and talked to them on a spot-check basis to see if we were really handling the antiselection that might occur. I think some variation on this might be what we have to do to accommodate speed that is necessary. You cannot do anything on that particular case, but it can be valuable information to change your strategy on a particular product.

I know the actuary is going to worry about illustration regulations; whether the client really understands and if we are meeting the requirements to make an illustration accurately reflect what the customer is purchasing. Challenges in design and in tracking are not challenges to the actuary only. These are challenges to you in conjunction with your underwriting and marketing departments. Where your persistency assumptions will be is a big area of investigation and initially involves some guesswork on your part. Cost benefit studies on underwriting requirements and a lot of the questions you are asked. How successful is a question at getting what you really need?

Product development and product management are not the only ways for underwriting to be used on the Internet. There are other ways of using the Internet to support underwriting. Medical research is being used in underwriting departments that have never looked at it before, but it is available and underwriters are looking at it. Certainly you are aware of competitive information that is easily available.

Client communication versus the Internet. E-mail for application status and follow-up is certainly possible if you think of your client as the agent instead of the insured. There are several software companies putting together an Internet platform for brokers to communicate with multiple companies about what is going on with their business, so there is no reason it should not work on a direct client level. We do ask for a lot of information in underwriting, and we need to find better ways to feed information back through to our marketing areas for warehousing and mining.

Last, in the reinsurance area, the movement of both requirements and requests for reinsurance and decisions can be mediated. Actually, that process has begun, so we can stop sending fat Federal Express packages full of paper every day.

My conclusion is the same as that of my colleagues. There is much to be done. We are not doing business the same way we did business before. We need to talk to each other earlier in the process. We need to think of solutions and try to adapt to what we are doing. We need to provide each other feedback. Underwriters need to tell you what is coming in. You need to tell them how important to the profitability of your product is persistency or the placement rate. We need to be able, most importantly, to respond rapidly to changes as the product lives, so we can work profitably by doing underwriting on the Internet.

Mr. Jeffrey S. Marks: One thing I was hearing was there might be two types of Internet consumers. One is willing to go through some underwriting and get very low preferred rates and another wants a quick decision but might be willing to pay more.

Is that the way you see it or is it somebody who wants the lowest possible preferred rates and wants it now?

Ms. Schmidt: Are you talking to all of us? We might see it a little differently. For me, I think there might be several different types of consumers with a couple different products available to them. All I can make is a simple analogy. If I know what I want, I go to amazon.com, but if I want to browse, I still go to the bookstore. Certain things are best sold through channels other than the Internet.

Mr. Gallo: I think no one really knows right now. I think it is a shotgun approach. What people have to figure out is if there is enough of one type of customer so they can actually make money. If you have a wide range, will people start to specialize or will they take a department store approach? Or will you focus on one type of customer because you figured out that model, and it is really different than the other model? At the early stage, you will see a lot of things happen; companies will try different things. Everyone is seeking the right product/customer combination.

Mr. Michael E. DuBois: Deb, I have a follow-up on the comment you just made. When you know what you want to buy, you go to amazon.com; when you want to browse you still go to the bookstore. I think this pertains to the products we are selling. There seem to be a number of people, myself included, who are still in the process of browsing when shopping for a financial plan. Will tools be coming along that will assist in the process of browsing, or is it something where there will still need to be some form of person-to-person contact, be it face-to-face, over the telephone, and so on? Maybe the agent can go to the Internet and help assist in picking the best product or a financial planner.

Ms. Schmidt: I do not think the Internet means the end of the agent. I do think the Internet means the end of the agent for selected types of business. I believe, as you said, there can be tools there to assist the customer who really does not want to talk to somebody. I believe there are still high-end estate-planning situations where a team of professional financial advisors needs to be involved. I am not suggesting that the Internet would eliminate that range. Does that answer your question?

Ms. Zupan: I would like to add to Jay's example. He talked about how electricity only started to have huge in-roads in productivity after a whole generation died. We are seeing that today. Your questions come through the paradigm of the way we used to do business. I think it is very hard to see what is going to happen in the future. A company (I can't remember its name) just announced you will be able to talk to a digital person on the computer. You are going to feel like you are talking to a real person. The company will incorporate a whole lot of knowledge behind that person, and you might still feel like you are getting personal service, but it will be digital.

Ms. Elizabeth Ann Braswell: Back to the first question, I definitely agree there will be two types of buyers—one willing to pay for the convenience of having guaranteed issue and one shopping for the cheapest price; how do you get around the antiselection you will have when offering both products? I guess you could have a maximum face amount, and then go over, but it seems your mortality is going to be atrocious on the guaranteed issue. Then, is it three times the price?

Ms. Schmidt: I do not know what the multiple of the price is. Hank George, who did not give a speech, submitted some handouts that say there are a couple ways to deal with antiselection. You can either underwrite for it or price for it. I think you can accommodate that. It is priceable. Of course the more you can do to apply some type of quick selection, the better you will be able to bring price down.

Ms. Zupan: We will have more information on people. Deb discussed this. There will be things we never asked before. Through data technology and data warehousing, we would better understand. Technology is even allowing us to uncover stuff we did not know to ask. It is a little hard to answer how it is going to evolve. I think your question is driven by how we do things today.

Ms. Braswell: It will definitely be different. Some people would not necessarily be antiselective, they just do not have the time and convenience.

Ms. Zupan: We currently have these two ends evolving from guaranteed issue versus underwritten, but my belief is that it will come together. There will be different technology allowing us to know more about you; it will still be very convenient. If Hank George were here, he would discuss lifestyle, which he thinks is sometimes more important than what blood work shows. For instance, do you exercise? We will understand things through credit. How much credit you are carrying, which is a question we never used to think to ask, will turn out to be rather significant.

Ms. Schmidt: Setting up pricing based on how much information the client gives can be done today on paper, but it would be easier if it could be done on the Internet. The amount of information given would dictate the price. If you want to go the full extent and give the information on a smart card that has all your medical information or if you give it to me on a piece of paper, it does not really matter. I do not know what we will use, but I agree with Maureen. I think there will be a time when they are sitting in a room like this laughing hysterically at how underwriters used to go through an APS and read every page. There will be new things.

Ms. Zupan: There are all kinds of privacy issues connected with this and it has been a hot subject in the news in the last six months. Companies track what you do on the Internet. Think about what things, if you did not know you were being tracked, you might tell somebody about you as a person based on what Web sites you happened to get into, how long you got into them, and how deeply you went into them. I know there are issues but I am just saying there are things you can find out about people that might be very interesting that we never could have known before. I don’t know whether we will use them or whether we can. We will see how it will all iron itself out from a privacy and confidentiality standpoint. I do not think we are even beginning. We are just trying to understand the questions to ask.

Ms. Schmidt: We need to validate their mortality significance. We are not going to stop doing that, but I think there will be new ways.

From the Floor: I noticed everybody focused on life, but nobody focused on health in either the Internet session on the sales and marketing end, or in this discussion, (maybe it would have been different if Hank were here). We are personally interested in the health insurance aspect, especially individual health insurance.

Does anybody on the panel have any thoughts about how that could be addressed? When you have a health insurance form on the Internet, could you use it to do some underwriting on the back end, where you make the front end real simple? You still ask all the questions. They might answer no to everything. On the back end, when it is time for the claim, you could do it electronically and tell them right away. The people who lied get told, "Sorry," and the honest people have a very quick process. Does anybody have any thoughts on either one of those?

Ms. Zupan: I am not a health insurance expert by any means. Can you tie it to long-term care?

Mr. Gallo: I am not a health insurance expert either. I do not know. I have not seen it applied. I have seen this done on the group side but that is not where you are going.
I believe someone does post-claim underwriting outside the U.S. where laws are very different.

Ms. Schmidt: Which aspect of health insurance are you talking about? Is it the front-end underwriting?

From the Floor: For instance, with an individual health application, you have a very thorough questionnaire similar to what you see on the life individual policy. In the case of individual life, there is a tendency to do testing on the front end only when a person says yes. If one says no, you just give it to him or her. If a claim comes in where it is very clear the person had the condition and did not answer correctly, you handle it at that point. So that is one major difference.

Ms. Zupan: I guess I am not seeing where you are going with this. If anything, that makes some of the things we are talking about much easier in the area of health insurance.

From the Floor: I would think so but nobody I know is doing that when the claim comes in. Does anyone know something?

From the Floor: This is going back to the question before about there being two different buyers. As market penetration increases gradually, that will diminish and it will be a matter of time before we do not have to worry about two types of people. Do you have any projections as to how long they expect full penetration?

Ms. Zupan: I wish I had this statistic. There is a wonderful statistic about how long it has taken significant technologies to become popular. Electricity took about 50 years. Was anybody on the Internet five years ago? It has been a much more quickly evolving process. I interrupted where you were headed.

From the Floor: Does it become an issue as to when is it sensible to enter as a small insurance company or as a larger insurance company? As the penetration increases it becomes increasingly more important to get involved.

Ms. Zupan: Right. At the same time, there are tools developing that allow it to be easier to get into. My 13-year-old daughter has an Internet site. She figured out how to do it herself. You can go out and find out everything you want to know about Piccachu and Pokémon on my daughter's Web site. I did not help her do it. There are tools to help you get a presence on the Internet that did not exist a year ago. It is easier to get out there. To transform your organization in that way, is much more difficult.

From the Floor: I'm sure there are projections of this sort?

Ms. Schmidt: I think they are all wrong. I bet it will be shorter. You brought up one of the key issues we did not go into here, which is when you go back to your company, where do you start as far as having a corporate strategy? I have talked to people from different companies, and there is a lot of variety about who is making this push.

Is it your IT people who are pushing? Is it your CEO competing with the CEO of the company next door? We have asked some underwriting department heads, "When did they come to you on the Internet issue?" They say, "When they are almost ready to sell." I think if you can start raising your voice to say, "We want to be part of the strategy. Please do not come to us once you have decided to go out there and then tell us what you want." The answer will be different for a small company that wants perhaps a limited presence on the Internet versus what Jay wants to do or versus what the health company finds appropriate. You are going to have to drive them or they will drive you.

Mr. Gallo: I think the worst thing you can do is be a small company and try to have a big company strategy because you will get crucified. You have to make sure that whatever your strategy, it must match who you are, who your customers are, what your capital is, and what your financial position is. You can sink a lot of money and go nowhere. Likewise you could spend a modest amount of money, and put it in a very targeted way. It is not perhaps a full Internet strategy, but it goes where your specific customer is looking for assistance. Maybe that is a huge win for you in terms of reduced expenses or expanded customer wallet share.

Ms. Zupan: I believe the Internet allows you to get out to customers in a much cheaper way than if you, as a small company, decided to do it through building a sales force. It is much cheaper to do it with the Internet. The reason why a lot of dot.com companies are failing is because they spent 75% of the initial public offering money they got building identity in advertisements. That is where it all went; it did not necessarily go to making your site the best from a technology point of view and the most customer-oriented or whatever. It went to having the splashiest ad on the Super Bowl.

Mr. Gallo: You learn a lot by going to who your profitable customer is. So you have to know who your profitable customer is. You cannot interview all your customers because you will go all over the place. Are you getting more of those or less of those? Are you losing them or gaining them? What are they specifically looking for in terms of a change in their service model? If you figure that out, if you clearly understand what that is, you do not have to invent anything. You can take what other people are inventing and just apply it to your specific need, and I think you can make huge gains. Cost reduction is a great opportunity and that is the first place to go. If you can figure out how to do that you learn a lot and then you look at starting to expand the revenue line.

Ms. Zupan: The reality is there is a generation of kids growing up who do not know anything else. Deb might go to her local bookstore to browse. That is not what kids today are doing. They are going to amazon.com to browse because they can do it quickly and get the book delivered. We are going to have to understand there is a whole generation coming up who think we are weird for not being as amenable to all this as they are.

From the Floor: You talk about getting data quickly. Do you see other industries getting ready to be able to process data quickly? I think Hank George said, "If you tell me what drugs he has taken, I can tell you what kind of risk he is."

Ms. Zupan: He is right. We can do that.

From the Floor: Are drugstores getting online more often?

Ms. Zupan: Not 100%. Not yet. We can do better.

From the Floor: Are drugstores getting online so that we could pass data quickly or get data quickly versus somebody else?

Ms. Zupan: I mentioned there is a Web site, and I encourage you to go out and look. It's www.aboutmyhealth.com. There is a tutorial you can walk through so you can see what it looks like. I interact with my doctor; I exchange e-mails back and forth. I happen to have thyroid problems. The way this Web site would be set up is when the latest thing comes out in the *JAMA* about thyroid disease, it automatically sends an e-mail to me to go pull the article. It will interact with my pharmacy so when I need a new supply of medication, it will alert them. All I have to do is go pick it up. It keeps all my health records. I can go back and click on something in my past medical records to access the Internet for more research. It is not this sophisticated yet, but you can see the kind of thing that will come out.

Ms. Schmidt: Yes. The area of pharmacy records is one of the areas that are about to hit us. There is a lot of information banks have collected either in their customer base or through their mortgage lending links. They are way ahead of us in terms of models they use to approve mortgages and the way they draw information in quickly. I think a great deal of financial information could substitute for much of the nonmedical underwriting we are currently doing. It is not paper.