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“Millennium Underwriting”

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Summary: This session focuses on how life and disability risk assessment and management might be directed in the first decade of the 21st century. Specifically, the panelists address:

- *Designing and implementing a virtual insurance company using today’s technology, expert systems, and outsourcing services*
- *Understanding the “insurability profile” concept and how it applies to the concepts of “fast, accurate, and cost-effective”*
- *How to determine and assess the real value of the underwriting process in the next millennium*
- *Improving underwriting productivity through electronic connectivity*
- *Underwriting how new technology tools are changing the relationships between insurance companies, underwriters, and agents*

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Mr. Richard L. Bergstrom: We will talk about “Millennium Underwriting.” What will the underwriter of the 21st century have at his or her disposal to evaluate risk on a fair, fast, and speedy basis? We have three panelists today, none of who is an actuary, I might add, who will give us their vision of what the underwriter of the 21st century might use for his or her toolbox. Our first speaker is Hank George. Hank has spoken to actuarial audiences for many years. He currently works for LabOne. Hank is actually based out of Milwaukee, Wisconsin, but LabOne, of course, is in Lenexa, Kansas. I’ve never known someone with quite as much energy and exuberance as Hank has toward the insurance profession.

Hank wears many hats. He is the founder and editor of *On the Risk*, which is a quarterly underwriting journal with over 4,000 subscribers in over 50 countries. He’s also editor of a bimonthly publication known as *Hank’s Journal Scan* which offers underwriting-focused summaries of articles published in over 40 medical journals. Hank is a graduate of the University of Wisconsin in Milwaukee and he currently resides in Milwaukee, Wisconsin.

Our second presenter is Mike Gaines. Mike is chief operating officer for PMSI Services, Inc. PMSI provides new business and claims outsourcing services for the life insurance industry, including teleapplication interviews, attending physician’s statements (APS), inspection services, and TPA processes, which include underwriting. PMSI is the original sponsor of Task Force 72, which both Hank and Mike will speak about in their presentations. Prior to joining PMSI, Mike was president of ASB Medi-test, and prior to that was executive vice president for Kimberly Quality Care and he led the Medi-test Paramedical Division since 1981.

Our final speaker is Maureen Zupan. Maureen is a management consultant for Data Executive International (DEI). Maureen has 26 year’s experience in the insurance industry: systems, policyholder service, underwriting, issue, claims, marketing, you name it. Before joining DEI, Maureen was associated with Mutual of New York Life Insurance Company, most recently as vice president responsible for underwriting, issue, and claims. She assumed the responsibility of Mutual of New York’s Policyholder Service Department for a year and a half before moving to her most recent position in 1989. Ms. Zupan is a Fellow of the Life Management Institute (FLMI), and currently has seven of the CLU exams under her belt. So, with that, I’ll turn the microphone over to Hank.

Mr. Hank George: My comments are really sort of an opening act for my two friends and professional colleagues, Mike Gaines and Maureen Zupan, who are the real experts on the technology side of this subject. I’m going to give you background and the view of the 21st century in part because I have the privilege of being chairman of Task Force 72, an entity created last year by Mike’s company,

PMSI. PMSI has a collection, of underwriters, actuaries, medical directors, and consultants who are looking at a vision of the first five years of the 21st century and asking, how will we manage life, health, disability, long-term care, and critical illness risk? Much of what you see here is a distillation of the views of that group.

Speaking in Auckland, New Zealand, addressing all the underwriters in Australia and New Zealand over the three days that I spoke in those two countries, I said that the industry would change more in the next three to five years than it's changed in the 20th century. I don't have to tell you, because most of you are scholars and students of this even more than I, how much these various forces and others, like merger consolidation, are going to impact us. What I'm going to do is make a few comments related to certain of these forces. The one subject I'm most qualified to talk about is the one I will abstain from, genetic testing, because really it's a subject unto itself, but I'd like discuss some others and use that as a way to segue into how underwriting will change.

The U.K., the site of the Second Congress, is ahead of us regarding issues related to market conduct. As many of you know, or I'm sure read in the *National Underwriter*, etc., in 1995 they had a practice of commission disclosure which required producers to disclose information to the client, the extent of which was unprecedented in insurance. It basically disclosed how much producers received. The punchline in that is the change in the number of life insurance agents in the UK over an interval from the early 90s to the year after the implementation of mandatory commission disclosure. No matter how you minimize it, that industry changed radically, and I think many of us forecast that something analogous to mandatory commission disclosure will be part of our reality in the future. So we have a force, a market conduct, that is changing the face of the industry and it's leading people to recognize the power of alternative distribution modality.

Alternatives to traditional agent, broker, mediated insurance product distribution include banks, the Internet, and telemarketing. I think everyone in the industry projects that some or all of these, particularly banks, the Internet, and telemarketing, will be powerful forces competing with traditional distribution, and their competition, the rules that they bring to the table, will change radically how we do life insurance risk management. I think that is a very safe conclusion. In Task Force 72, in my conversations with my peers, in discussions from podiums worldwide, interacting with medical directors, underwriters, actuaries, claims people, I have articulated these views, and I sense from eye contact, comments, messages I get on e-mail, that there is largely a buy-in to the belief that alternative distribution as a vector of energy in our industry will change risk management forever in radical ways. One radical change we all agree is inevitable is that banks will not decline

people. To be declined by a bank you will need to have anointing oil being applied to your forehead by the clergyman of your choice during the application process.

The myth that 2–5% of individuals buying life insurance are uninsurable because of some line drawn in the sand is just that. Imagine a bank saying to someone, here, take your savings account, your checking account, your certificates of deposit, and your mortgage loan, and get out of here. It is an unthinkable scenario. So what we will have are proliferations that will keep many consulting actuaries very busy—a proliferation in product so that anyone who is not near death at the time of application will get insurance. As one dear friend of mine said, what's the difference between a perfectly healthy 70-year-old who can dunk a basketball and a 35-year-old newly diagnosed with HIV infection? The difference is the 35-year-old will almost certainly outlive the 70-year-old, and yet we compete quite vigorously to insure all the healthy 70-year-olds and 80-year-olds and 90-year-olds, and we all, with one exception in the United States, argue that we can't insure the healthy 35-year-old with HIV. That's nonsense. The South Africans have been doing it quite well for years. Dr. Bob Pokorski, the eminent world medical director of Cologne Re, is this morning, I believe, in Nashville, Tennessee, at the Institute of Home Office Underwriters' meeting. He's speaking to 600 or 800 of my peers on exactly that subject, the next step, insuring routinely HIV sera positives with products and underwriting strategies to accommodate that population. This will continue until virtually everyone has insurance.

New Zealand is a refreshing environment. Did you know that you can't decline people in New Zealand? That's not strictly true. You can, but the protocol for declining is so difficult that it's not worth it. It's cost ineffective to decline. So everybody who applies for life insurance in New Zealand gets something. There's got to be a way to price everyone. If the New Zealanders can do it, we can do it.

The big shift in the next five years is going to come in the area of competition to get there ahead of the pack. Deceased Confederate General Nathaniel Bedford Forrest, one of the cavalry generals in the confederacy, said the strategy for winning is to get there first with the most. I love that quote. And I think you're going to find insurance companies increasingly focusing on how they can expedite the risk management process, the underwriting process, to get as many policies approved as quickly as possible. The banks clearly will be looking at turnaround times that would boggle the minds and gray the hair of a garden-variety life insurance underwriting executive. So there's going to be tremendous pressure to turn the stuff not in weeks, not to let it age like cheese in purgatorial orbit around the pending file, but to turn it in 72 hours. In fact, our Task Force 72 got its name from a consensus of your charter members who believe that median turnaround time of a \$500,000 life insurance application on a 35-year-old individual in the year 2001

will be 72 hours. Now, that's a major paradigm shift. For that to happen at least two things have to go on more or less simultaneously: (1) We have to maximize technology, which is why we have two experts like Mike and Maureen, and (2) we have to change the focus of how we select risk, and there will be radical changes there. Some medical directors and others will be alarmed and despaired, but the change is for the better.

On the technology side all sorts of things will happen, none of which I am competent to talk about. I'm not even going to think about discussing front-end systems or electronic requirements. The only subject I'm going to wax on, albeit briefly, is the concept that some say Prudential coined and some say a consulting firm from New Jersey coined. It doesn't matter. It's called teleunderwriting, and you'll hear me talk about that phrase momentarily because I think that's part of this future package. Unlike the others, it relates directly to the risk selection process.

What's going to happen in life insurance risk selection? Well, three requirements will dominate: the personal history interview (PHI), the telephone inspection report, laboratory testing, and motor vehicle records (MVRs). MVRs are so cheap, so easy, and so useful, that they'll be essentially universal at ages 16–90 for men and women, regardless of what's on Part 1 of the application. That's just a no-brainer. I won't even waste time going further with that concept. But lab profiles and PHIs will dominate. The telephone-gathered application, medical history information, and lay history information will become state-of-the-art. I would say that even though I work in the lab business, the number one underwriting tool in terms of maximized utilization five years hence, if not two years hence, will be this entity that 20 years ago was an outgrowth of the traditional street inspection report which begot the telephone inspection report which begot the PHI which is replete with a drill-down sequence. So you say you are a diabetic. I have five questions. You have another yes. I have four more questions. When it's done, 20–25 minutes later, I have a document that I will tell you is superior to any information-gathering document that we have presently.

I'm chairman of a study group of some 25 underwriting executives called the North American Underwriting Study Group. We're in our fourth year of existence. I asked my study group last year when we met in Savannah, What is the best source of information per unit of volume that you have? You're expecting an answer like APS or blood profiles. Here's the answer: PHI and telephone report with a drill-down sequence. People will tell you an enormous amount. We now have a level playing field in bodily fluids with the Food and Drug Administration's approval of urine HIV screening and confirmation. So these three entities are competing. It's amazing how many of our clients are now embracing alternative testing modalities like oral fluid and urine.

What you're going to have is a not altogether arbitrary line, which has been a well-studied by actuaries and others, drawn somewhere between age 35–45, probably 40. On the left of that line underwriting screening up to \$1 million realistically will be done with either oral fluid or urine. On the other side of that line blood will dominate, because once we cross that mid-40s line, much to my chagrin, we start seeing more chronic disease, and our focus changes in terms of what causes premature, extra mortality. I think you'll see PHIs and MVRs on both sides of the line as mostly primary documents, but the lab side of the line will vary. John Hancock did this a year ago and reportedly is quite happy, and many other companies, clients of my company, are making decisions analogous to this right now this year. Some are choosing oral fluid, which argues for the ease of collection. Some are choosing urine, which provides a substantially larger profile of testing options and more productive information.

There are people who still maintain that we will not ask agents to collect urine. I predict that that is an absurd conclusion, and it will not stand. Agents will collect urine. They did it when I joined a quiet company on a Great Lake. In 1970 our agents all collected urine samples which we tested in our own office. That's in the pre-industry lab era. And so it will be again that agents will collect urine samples. There's absolutely nothing wrong with that. It's quite doable. And I think you will find both of these entities widely collected by producers, especially in your garden-variety career agent-type operations in the years ahead.

Some requirements will fall into decline. Medical examinations will virtually disappear except for very, very large sums, that is, M.D. exams. That abomination, the chest x-ray—I say abomination because it seems inappropriate to require carcinogenic ionizing radiation to complete a financial transaction will also disappear. That is like having your hands irradiated when opening a checking account. It has no place in the financial process. And electrocardiograms (EKGs) will decline. The big question mark in all of our minds is to what extent will the use of enhanced laboratory profiles and PHIs with state-of-the-art, drill-down, medical questioning allow us to use fewer of those albatross APSs, and when I say albatross I mean slow. I mean turnaround time measured with a calendar, season change. Paradoxically my study group reports that turnaround times on APSs, especially from larger health management organizations, has lengthened, not shortened, in the last two years. It's getting worse at a time when those delays are intolerable to the process. I think you're going to see a substantial reduction over the next five years on our reliance on the physician's report.

I've said before I think we're going to get APS reports, mainly on three groups of people: the old, the sick, and the rich, each for a very obvious and different reason.

I think that somewhere in the vicinity of 40–70% of the cases on which underwriters might have historically gotten an agent amount-type physician's report or a routine report, let's say, on a diabetic or someone else, you're going to see underwriting done more and more with histories gathered from applicants on PHIs augmented by things that can be turned in 72 hours, like bodily fluid.

The paramedical situation, I think, is also going to metamorphose in the next five years. I think you will see most medical applications Part 1s and Part 2s, executed over the phone and handled as delivery requirements or at an Internet address. I think that's simply a faster way to get that core document, to get the underwriting process initiated. As a result of that, I think the paramedical metamorphosis of the next five years will be limited basically to physical measurements, specimen collection, electronic EKGs, and maybe certain other things that may evolve in that vacuum. I really think the vast majority of the applications will be taken either over the phone or at a Web site, which brings us to the teleunderwriting concept.

Let me illustrate this concept for you in a very simple way. This is how we have always done it. Agent finds client. Agent takes the application. The application goes to home office. Underwriter reviews the application. Underwriter tells agent requirements. Agent orders requirements. In some cases facilitates, in some cases causes a problem in the process. Anyway, agent gathers. Agent acts as intermediary. Home office says, "oops, need this, this, and this." Back to the agent, through the agent to the client. Underwriter gets it again through the agent, makes an underwriting decision. The agent gets the policy and goes out and Mirandizes the buyer.

This model has the agent, the producer, broker, whatever we call the species, spending in some companies 40–60% of their active hours acting as a go-for, as an information gatherer, as a conduit. There are people who envision, people who said from the podium, marketing people much smarter than I, who have said that the 21st century milieu of the agent will not tolerate that much time being deflected from the sales process. For this distribution system to be viable this is going to have to be basically 98–99% selling, not information gathering. Enter the teleunderwriting concept, which is now actually operating, to the best of my knowledge, at the Prudential.

The agent finds the buyer and asks two questions: Are you alive? Do you intend to remain that way? That information is communicated to head office, and that's it. The agent next becomes a party of the first part. After the policy has been fully underwritten, all the requirements have been gathered, with the underwriter acting as the agent's surrogate in the gathering process, when it's all done, and the client's been Mirandized and read his rights, then the agent delivers and gets the signature

on the application, which is a delivery requirement, and the policy's placed in force. This concept called teleunderwriting has many variations, probably as many variations, conceptual and practical, as there are companies.

When I met with my 25 peers in Savannah earlier this year I asked, how many of you are either implementing or actively examining for implementation most, if not all, of the basic concepts of teleunderwriting? Remember, they worked for many types of companies, from fraternal on one end to big mutual on the other end with other in between. All were in North America. And most were in the United States. And with maybe three or four exceptions there was a unanimous yes response. I have no doubt, buoyed by that feedback, that the agent will be largely out of the life insurance underwriting information-gathering process, which is a devastating blow to my best friend and myself because we wrote the book for agents on how to do it. So there go book sales.

I also think there will be a major acceptance of health habits as a factor in risk management. I think increasingly we will go from where we have gone in the last two decades: tobacco, alcohol, drugs, obesity versus normal build versus underweight, driving record, on to other entities, the last one being very hypothetical. Imagine, I have good epidemiological data with which I can make supportable, sound inferences about insurability based on leisure time physical activity and habitual dietary choice. I can measure those. Why don't I do that now? Because there's an intermediary juxtaposed between me and the information giver, and the intermediary has been known to ask questions like, you don't smoke, do you? Sort of leading the witness.

Imagine if all of the Part 2s, if all of the medical histories, if all the data are being gathered at a Web site or over the telephone by a neutral third-party questioner. I might be able to ask very salient, very sound questions about areas of health habit, voluntary choice, very, very keen subjects for buyers because they can control the outcome. Right? They decide if they're couch potatoes or whether they jog. They decide whether they eat nothing but McDonald's. They decide whether they're fat or not, for the most part, or whether they abuse alcohol or whether they use tobacco. These are much more user-friendly types of decisions, much more a buy-in from the consumer.

Every time this industry has asked consumers in any environment that I've seen, "What do you like better, underwriters tweezing through medical histories, finding minute details to decline you, or underwriters looking at your personal choices and validating whether you're insurable and on what basis?" There's always been a hosanna for the latter and a boo for the former. I think you will find that this very popular in the next few years. I think you will find with our new system this kind of

information is gathered much more readily and actually used in the risk management process, which brings us to the last point.

This is a quote from *National Underwriter*, "The international marketplace is going to attract almost everyone." I don't see any other way. Add on to that a refocus on marketing to ethnic populations domestically. Many companies now have launched campaigns to sell insurance to markets we have ignored, and you know which markets I'm talking about, urban markets, etc. With that combination we will see a radical change.

National Underwriter, at the end of June, projected premium growth over the next seven years in three stable insurance markets: U.S., Western Europe, and Japan. Growth statistics were uninspiring. You already know that they're trying to enter into China. They're falling over themselves as companies to impress the Chinese insurance regulators so they can be allowed to enter into that alluring market.

But there are many other alluring markets, aren't there? Many companies are entering Latin America, not writing offshore business so much anymore but in joint ventures. One of my dearest friends, who's chief underwriter of Sun Life of Canada is on his way this weekend to Bombay, New Delhi, etc., for his first visit to what will become a new market of key interest for Sun Life of Canada. Vietnam offers tremendous market potential, not to mention all of the old so-called evil empires. Right now we are working on proposing a seminar in Warsaw to train people in the insurance industry there so that we have an environment that's user friendly for when Eastern Europe opens up like a ripe flower in the next five years for North American companies. I envision all of this change, and I am awestruck by it.

Let me give you the Internet address of the professional journal of the life insurance risk management community. It's called *On the Risk* and it celebrates its 15th anniversary next spring. Most of you are wired in one sense or another. It's address is www.ontherisk.org. This Web site was built by a genius named Tom McCarthy from Businessmen's Assurance Company in Kansas City. Tom has patched us into all the other risk management Web sites. So it's like one-stop shopping from a life and health risk management position. We hope you'll all come and visit us and learn about *On the Risk*, a journal that you should be seeing if you're not seeing it. In fact, you're looking at authors from *On the Risk*. So you might want to seriously think about visiting our Web site and patching into our reality.

Mr. Bergstrom: Let's take questions. If you don't have a question now and think of one later, write it down, and I'll make sure that Hank gets it.

From the Floor: You mentioned that we'll be underwriting things like leisure activities, stress, and those kinds of things, and also at the same time we won't be relying on the agent to question the applicant. Combining those two, how do we validate when someone fills out an application over the Internet or from inside a kiosk that they really are not under stress, that they really have a great lifestyle, that they don't eat junk food, etc.?

Mr. George: How do we validate it now? How do we validate all the answers we get now?

From the Floor: Well, we also have APSs and things of that nature.

Mr. George: That's right, but unfortunately the APS information that we get only occasionally, and at best sporadically, gives us validating information for the health lifestyle-choice factors that we use now. I would say we're lucky if one in four APSs references tobacco-use habits.

There was a study a couple years ago that looked at the proclivities of physicians when they asked their patients questions about lifestyle choices. I'm talking about core stuff—drug use, alcohol use, tobacco use—and the vast majority of physicians did not routinely question all of those parameters. In fact they were more likely to ask about physical leisure-time activity or dietary choices than they were about using too much alcohol or using drugs of abuse. The fact is that all of the people who have used PHIs and have been pioneering this, have found how remarkably forthright and candid people are. When we build the PHIs we have ways of building the drill-down sequence where I think we can expose people who are giving us false answers. It's like the Minnesota Multiphasic Personality Interview, where they have trick questions unmask you when you lied about your psychosis on page 1.

The point I'm making is all the feedback I've seen from companies is that they think they get very valid information on the PHI and that with the information being gathered, the way we're going to gather it, which is without the intermediary, we will get even more valid information. We're going to be accepting some of this at face value. Some people are going to try to mislead us, just like some people disavow tobacco use. Seven or eight percent of tobacco users have smoker's amnesia. And maybe we'll have additional tests in the antioxidant area or other markers that we'll be able to use to validate some of these things. Maybe we'll put together algorithms with regard to lifestyle risk factors to edit out the people who are true couch potatoes from those who get leisure time activity. I don't know how we will do this, but I am very sure that we will do it.

Mr. Bergstrom: One of the other things that you didn't really mention, but Mike will, is the use of pharmaceutical information in the underwriting process—asking folks what medications they use, and to the extent that you can collect a home office specimen, validating that with a urinalysis, which does show up many illegal and legal drugs as well.

Mr. George: No question about that. Pharmaceutical information will be priceless.

From the Floor: Can you tell us what the relative cost reduction might be in moving from your old underwriting technologies, eliminating the medical exam, the x-ray, the EKG, and the APS, to these new underwriting technologies?

Mr. George: An excellent question, and the answer is I don't know because it varies in every company with the extent to which people rely on EKGs, chest x-rays, etc. They're expensive both in terms of unit cost to purchase and internal handling, if you count medical director and underwriter handling time, etc. These others are electronic. The laboratory test, the specimens, are gathered and turned in 24-36 hours usually, and so there's a tremendous savings in terms of handling costs and unit costs of acquisition. I don't know what the final numbers would be. In fact, the best person to ask is Rick who's done most of the good protective value work that's been performed on underwriting requirements in the last two decades.

Mr. Bergstrom: We haven't tried to quantify that yet.

Mr. George: It varies from company to company. Certainly companies that are top-heavy in medical and EKGs and chest x-rays are going to realize a substantial benefit because these tests are very expensive, a lot of hands-on work that doesn't take place with lab science or MVRs. MVRs cost approximately \$2.00. They're all electronic and automatic.

From the Floor: Could you compare oral fluid testing to urinalysis?

Mr. George: Well, the big difference is that oral fluid has the advantage of ease of collection. I mean on a level playing field it's easier to have people brush their gums with a little pad than to collect the urine sample, right? At least that's the existing rhetoric. The oral fluid's big limitation is the number of things you can do. Right now there are only three modalities that are being done in the United States on oral fluid: cotinine (tobacco), cocaine, and HIV. Urine has a much more extensive bill of fare, and there are many things that I think could be done on urine in the future if we had research money. It is also easier to use urine as a testing medium than oral fluid if only because of the sample size. One nice thing about urine, you get yourself a nice little bucket of it! With the oral fluid, you could have

a shortage of the amount. When that happens you run out of a testable quantity very quickly. Oral fluid is more appealing as a collectible entity. That, I think, is the big issue costwise they're very similar, although urine kits are much cheaper. Oral fluid kits are much more expensive. Because of the kits, you'll pay a steeper price in the short run with oral fluid than you do with urine.

Mr. Bergstrom: Our next presenter is Mike Gaines.

Mr. Michael H. Gaines: With regard to rapidly processing new business, I want to talk to you about three basic areas. I also want to talk a little more about what Hank's discussed.

The first area is Task Force 72, what we're doing there, and what part you play in it. We started looking at electronic medical records first, because we kept hearing that they were ready to be used by the insurance industry. About a year and a half ago, we began looking at how many physicians are actually using electronic medical records. How can they be utilized in our business? Frankly, we found that very few physicians are using electronic medical records, maybe 5%, and probably in my lifetime it'll still remain about 5% or 10%. Physicians are very, very reluctant to use them. But we did begin to find other kinds of electronic data and electronic data warehouses.

Secondly, I want to talk to you about where we are, where we're not going to be going, and what we're doing. Finally, I want to talk about General Life, a virtual insurance company in Edwardsville, Illinois. I want to share with you their experiences. I'd like this to be interactive because we need your help. We are doing many things in teleunderwriting, in the outsourcing services, and there really hasn't been any use of paper and pencil. What are the savings involved in this? Everybody kind of feels it's the way to go, but what's the payoff?

PMSI is located in Waco. We have about 800 employees there. About 400 of them collect APSs for a living. Rick Bergstrom has a study that shows the APS as the best piece of medical evidence you can use in underwriting. We like APSs, but we realize that some day there's got to be a better way. In addition, we also have, especially over the last 12 months, one or two clients a week coming down to visit us in Waco, generally reengineering teams, consultants, underwriting department heads who are looking at new processes because we're quite involved in teleunderwriting and outsourcing services. We provide a soup-to-nuts kind of process in the new business area. Our philosophy is there's an enormous amount of data out there. There's a tremendous amount of data for us to use, even in our business. But it doesn't really become valuable until it becomes information, and one of our tasks and missions is to help translate that data into information. For

example, we take an APS and we condense it into an abstract that's maybe three paragraphs long, and we send it in to the carrier so that their underwriters can look at one or two pages as opposed to a 25-page APS.

Until June 1998 we were owned by Policy Management Systems Company (PMSC), a software vendor. We've utilized automation from PMSC and others to translate that information into knowledge, and present it in a package so that the company ultimately can use its own wisdom to make decisions. Another principle that we have is that we're not trying to eliminate underwriters and we're not trying to eliminate agents or anybody else in this whole process. We're just trying to find a better, faster way of doing things. We must find processes to increase automation to identify the unacceptable risks early on, before requirements are ordered, before a lot of time and effort has gone into evaluating the applicants. At the same time, especially because we're dealing with banks, and their concern of how we treat the client, how can we use automation to accept more quickly those who obviously should be accepted and leave to the knowledge workers that part that they know best? So it's a fairly logical process but one that isn't readily used.

Just a couple of other observations before we go on. In the information vendor community, we figure you are spending about \$750 million a year for what we provide. Most of it would not be needed if an applicant were 100% accurate, had total recall of everything that goes on, and were 100% truthful. The adverse information that's gathered is valued and critical in the process. But it really is the tail wagging the dog. There is an underwriting pyramid.

Sixty percent of the applications in general that go through the review where a specimen is gathered, lab tests are completed, and the application is clean, and all information looks OK. Those can be issued without obtaining more information. Forty percent of applications require more information. That's where the APSs come in. But 75% of the time, those APSs substantiate what that applicant has said on that application: that the applicant had a particular illness and a particular episode, how they were treated, and the outcome. Ten percent result in some kind of discovery, but an even smaller part of that discovery results in any kind of real action. So a \$750 million industry evolves around that 10%, and that just counts the vendors that are involved, not all the underwriters, field underwriting, and support staff.

It's an expensive and time-consuming way to do business, and everybody is finding there has to be faster, cheaper, better ways of doing it. The task force estimated that we could eliminate about one-third of the tests that are performed. What's it worth? Maybe \$23 per application. We collect in Waco about 1.2 million medical records. One of our competitors collects about 1 million. We send out one-and-a-half tons

of paper a day through the insurance companies. Airborne Overnight has a jet service into Waco. It's the only jet that flies into Waco, and the only reason they've come directly to us rather than us trucking it down to Austin or up to Dallas is because we have one-and-a-half tons of paper that we send out every work day. That's about 400 tons a year. Together with the other competitor there's probably 800–900 tons of paper that goes to the home office a year just from the two of us collecting those medical records for you. We kill a lot of trees.

Regarding the task force itself, which has met four times, as we began looking at electronic information and what was out there, we felt that we were ready to do some things. We needed industry backing. We and PMSI have sponsored the task force, but we've not tried to drive it. Hank George is the chair of the group and usually is in control. So as a vendor we're there to participate, to provide information. We bring in other vendors. We've brought credit bureaus in. We've brought clearinghouses, medical claim clearinghouses, prescription clearinghouses, and others.

We have a mix of individuals in this committee who are brainstorming what we're trying to do. Mary Bahna-Nolan is an actuary with NACOLAH, Ron Colligan is in charge of underwriting for Jefferson Pilot. Rick Bergstrom of Milliman & Robertson, Hank??, Bob Hague, in charge of underwriting for Mass Mutual. Mass Mutual's a disability insurance company. We wanted disability to be represented. Dr. Hankowitz is medical director for Trans-America. We wanted a physician in the group. Bob Holliday, an actuary, also is in charge of the new business process, including underwriting, for Winterthur Re. Alice LeVigne is in charge of new business process for Nationwide on the life side of the house. John Krinik writes for *Journal Scan* and *Underwriter Perspectives*. Lynn Patterson's the chief underwriter at Zurich Kemper. Ken Prillaman is executive vice president of new business now for Bysis, which is the largest brokerage in the country. Linda Shumilas is associate vice president of New Business for Allstate and Barb Stansbury for Northwest Mutual. We have life insurance and disability companies, underwriters, actuaries, and medical directors, and so on.

Here are the critical components of our goal. From the point-of-sale through policy issue, what can we do to lower costs and speed up the process? The key is automation in underwriting, taking data and translating them into information, and using automation to either send it off to a knowledge worker such as the underwriters today or medical directors, or using automation to make a decision. Having that electronic connectivity from the point-of-sale through policy issue not only sends information electronically but eliminates errors and dual entry in the process. The industry is already doing a lot in this process. Some of it's happening today.

One of our long-term goals is a single point of access for requesters. One large insurer has seven different computers from vendors on the floor in their home office. To order APSs automatically from us, they'll use a computer that is not connected to their underwriting system. They'll use our electronic data interchange to order APSs from us. They'll also go to another machine and order inspections from somebody else. They'll order on another machine the medical information bureau (MIB) and get that MIB report. They could go to another machine and get their lab results. This is unbelievably cumbersome process in getting information in and out. We want a single point of access for requesters and a single point of delivery for providers. That means standardization and a clearinghouse for data that connects with all vendors. Part of this is already built through a preferred provider network, but this is just the start of the electronic network that can be built.

An example of it already exists, and it's been there for several years in the auto insurance industry. If you're filling out an electronic application for auto insurance for some companies in certain states, once you put a name and telephone number in you don't have to enter anything else in the application. You'll be doing it to go through the process, but at the same time the carrier is using databases to see what information's out there. They're going to base the premium on a score they're going to obtain in that process. How do they do that? Well, they go to your credit history at a credit bureau and look to see where you live and where you work, and they then know the distance between where you live and where you work. They assume that's the distance that you have to drive for a day.

If you say that you only put 5,000 miles on your car a year, and actually the distance back and forth to work is at least 10,000 miles, they're going to rate you on the basis probably of that 10,000 miles as opposed to 5,000 miles.

They know the number of people and the ages of the people in your household. They know the number of drivers. They know the teenagers who are driving the car. They go to the MVR records and see what your driving record has been. They go to a claims clearinghouse to see whether you've claimed any accidents or any repairs and damages. They can do those things in seconds today. They've run these scores through Fair Isaac or other models, and they've come up with an individual score that defines that premium for that particular individual.

The model for what we're trying to achieve exists today, and the benefits of it for the carriers and clients are numerous. One of them is application prefill—putting the name and phone number in, and everything else can come out. The address and where you work and so on can be prefilled to speed up the process. There can be a prescreening. Before any information's ordered they can see whether you have

driving record problems. They could decline you right away. In our industry, if somebody's over age 50 and applying for a \$500,000 policy, there are basic requirements that are ordered regardless of their health or their own individual experience. The new way will be more focused ordering based on that individual with macro and micro scoring. And it's either issued, declined, or sent through the traditional process. That's an important concept that we'll soon discuss.

Task Force 72 has to center initially on fraud and fraud detection. We don't want to be like big brother going after the information that resides out there in databases. We feel it's wiser if in the process it detects and prevents fraud and reduces the time and inconvenience for clean prospects, while reducing the cost to the customer.

In Task Force 72 we've talked about privacy extensively. We've brought people in to discuss it. There's no question at all that you must have the consent of an individual from the database. It's sensitive because we're going to be accessing health data records and pharmaceutical records and so on. We're very concerned about the privacy issues that involves.

We're also looking at new technologies. We had a presentation from a physician from Rodeer. Rodeer is the third largest transcription service in the U.S. They do transcriptions for physicians, and have developed software that searches for codified information in a transcription tape. So if you're building a model for the kinds of things that you want to look for in a health record, your model could automatically access a transcription that resides in data warehouses, and most of them are stored electronically, and find that information.

As a committee we've also been looking at the credit history and MVR records. There is existing software used in property and casualty that could easily be used in life for MVR. If you're an underwriter who's looked at the driving record reports from 50 different states, you know it's a confusing mess. What's reckless driving in this state could be careless driving in the other state and a totally different term in yet another state. But there is software that standardizes all of that. It's used today in property and casualty, but it hasn't been used at all in life. One of the things the task force has directed us to do is to go get that information and begin to introduce it into the life side.

The next source is the claims clearinghouse. When we began looking at electronic medical records and saw there wasn't that much involvement from physicians, we looked at other things that are occurring. One of them is there are more and more electronic medical claims. If you make a claim for reimbursement to a carrier for medical expenses or if you're in an HMO and they are retaining a record on you, there is probably a clearinghouse that's handled it. There's a pyramid where the top

four or five clearinghouses in the U.S. handle all of these claims, whether it comes directly from a physician or from another clearinghouse.

Contained in these medical claims are international classification of diseases-9th revision codes and CPT codes. ICD-9-CM codes are five-digit diagnostic codes. The first three digits tell where on the body a person has a condition. The last two digits are very specific about the condition that the individual had, so this is a very accepted standard. The ICD-9-CM codes have been in Medicare for a long time and are about to evolve into ICD-10. More and more insurance companies are requiring this diagnostic information. Ultimately the government's going to mandate that outcome studies take place, and that's the standard that's going to be used for outcome studies. Also, if you are treated at a physician's office you'll notice, as you're paying the bill that they've checked a box on the bill, and that box has a small number on it. That's a CPT code, and the CPT code is a treatment code from a physician. So we know the diagnosis, and we know the treatment that the physician's providing. There are also medication codes on the claim form. You can see the claim form is extremely valuable. We thought maybe we're onto something here that we can use very quickly. If you know how they're being treated for a particular diagnosis, then maybe you can underwrite on that. Maybe you can put it into an expert engine and make decisions without somebody having to look at it. The problem is that there are just too many errors and there isn't enough use of medical claims yet. About 30–35% of the population have medical claims being processed electronically. We feel it's got to get up to 65–70% to be meaningful. And then there are many coding errors. The errors come from physicians who, frankly, are undercoding so they don't have to go through the hassle of fighting with a managed care company about being reimbursed, which is a problem for you. Or they miscoded because it's an independent coder who's being paid by the hour who's trying to interpret the physician's handwriting and can't do it. About 30% of the codes that are in these cases, it's estimated today, are in error. That's much too high for what we're trying to do.

So we gave up on the medical claims clearinghouses for now. The two clearinghouses that we're centered on now are pharmaceutical and clinical lab claims. Since 1995, for 95% of the prescriptions that are written in the U.S., even if you pay by cash, an electronic record has been kept. There are already two companies that retrieve the information that's in that electronic record and resell it to pharmaceutical companies that use it for demographic studies of where prescriptions are being prescribed and how much commission to pay salesmen. Unfortunately, what they collect doesn't give us all the information we need. We need patient identifiers, which they've stripped off, and we need more history than that, but the bridges are already there to 26,000 pharmacies and to the physicians. The other resource is the clinical lab industry. There are three clinical labs that

perform the lab tests for 80% of the outpatient tests that are done in the U.S. annually. Those tests have been kept electronically, and there are patient identifiers. And those three labs also are willing to participate if it's economically viable.

The task force is building a business plan and a case for going out to your companies and asking what's it worth to them. Will companies ante up to help us build this network? Another MIB could evolve from this. It's too big for the life insurance industry to do by itself, but two of the labs are actually involved in building these warehouses today that ultimately do health-outcome studies for the government. It's worthwhile for them to do that and we could piggyback on their work to provide the service to our industry. We're continuing to look at other means of speeding up the process. We can use the data from pharmacies, from clinical labs, from paramed information, PHI information. We can build the data warehouse, and store that information in the data warehouse continuously, which is not unlike what the MIB does today. Then we could produce it on the basis of the company's individual rules. What we're trying to find is red light/green light. If it's red, kick it back into the traditional underwriting process. If it's green, issue the policy or take some other specific action. We're not trying to underwrite on the basis of the information we're providing. Our assumption is that that information is going to be a guide for you to do the information ordering for underwriting, but falls back into the traditional process after the initial assessment.

We're also automating the process from the point-of-sale into the home office, and Maureen will talk more about what's going on in the home office. Our effort begins at the point-of-sale. PDQ 2000 is one of the largest agency systems used in the field, and within PDQ 2000 a number of vendors have worked together to integrate their systems into the agency system. It begins with Cambridge Mobile which takes a client's demographic information, their name, address, and basic information. That information's entered by Cambridge. It's never reentered again by anybody else. Whoever is picking up the order from there picks it up electronically. Whoever first entered information, that information transfers to all so that by the time it ends up heading to the home office everybody's performed their job in terms of processing that applicant, providing a quote, collecting an assigned illustration, doing an electronic application on them, sending that order to the parameds and receiving the status back from the parameds on where that order is. All that can be done today very quickly and very accurately. And, again, it eliminates errors that are happening in the field with the application.

I want to mention one of the things that we're doing in the home office and again ask you in your business to begin to think about what's the value of this. This is the teleunderwriting process. Hank mentioned Prudential. Really, teleunderwriting

began with IUS and with ITT Hartford in the early 90s, late 80s, and it's evolved since then. We do about 6,000 electronic application interviews a month in Waco, and that electronic application takes away stuff that the agent used to do. The agent just does a preapplication or turbo application.

The turbo application is a brief preapplication that the agent fills out. It's filed as a Part 1 in the United States. It has seven questions, one of which is a general medical question for permission to order the MIB, under the by-laws of the MIB. The agent faxes the application to our center in Jacksonville, Illinois. As opposed to the typical home office where 80–85% of the applications received by the underwriter directly from agents have something wrong with them: our applications are generally complete and accurate. We contact the applicant and go through a 20-minute interview. We use a home-office-type application entry system with software modules built around it to ask drill-down questions. The system qualifies the answers using a medical dictionary so that they can be run through expert systems and so on.

Upon completion of the telephone interview we've already completed Part 1 and Part 2. We've done the PHI inspection and we've prescheduled the paramed. If you're going through the traditional process, the agent asks you a series of questions, the paramed asks you a series of questions, the inspection company calls and asks you a series of questions. You're asked the same questions three or four times. This process eliminates that. You have one set of questions asked one time. We had a client come in and listen to an interview once, and every time I see him he talks about it. He witnessed an interviewer asking an applicant, "Do you use cocaine?" And the applicant said, "Yes, I've used cocaine, but I only use it on the weekend." And he could not believe that kind of statement would come up, but that happens all the time to us when we do telephone interviews. It's amazing how open people will be.

Also in this process, we eliminate about 30% of the APSs because the information we gather is much more accurate. Today we're doing things that have saved twentysome days in the new business process and we're getting better information. What's it worth? What does it really mean in dollars and cents? I think that's something that has to be addressed by your industry. With this reduction in time, with better information, clients need to know, what is the bottom line result?

Ms. Maureen C. Zupan: I'm will try and give you a broader view of the changes that are happening in the new business operation instead of just the underwriting portion of it. Until now in the underwriting industry the agents have been the company to the client. The agent's been the one who understood who the client was, who knew which clients were in the same household. They were the ones

who not just represented the company to their clients but who were the company to their clients. And one of the reasons that that was necessary was because technology didn't allow companies to get right to a customer in a way that made sense from the customer's point of view. We had these huge monolithic computer systems that were very difficult to get information from. You had to go through a programmer to get the information. So access was very limited. Everything was based on policy. You didn't know who a client was. There was no way you were able to connect an annuity with an insurance policy in these computers. There was a very long lead time in getting new products introduced, and our computer systems were based on the back office operations, like billings and loans and premiums.

Companies are getting smarter now, and their paradigm about customers is shifting very quickly. There's a real client orientation. We've talked about it for years, but it is finally happening. I think companies are beginning to understand what "client" really means, which means that they understand that it's much easier to get a bigger share of a particular customer's wallet than to try and get a new customer. So they're doing things aimed at getting that bigger share. They're using things like target marketing and new alternate distribution systems that I think are going to work. In insurance there's a much greater understanding of a company's need for excellent customer service. At the same time technology is evolving at a very rapid pace, and it's allowing companies to make that shift to a customer's orientation.

Our computer systems are smaller. They're much more flexible. There are easier ways to get at the information in computers, like kiosks or the Internet. Our systems are finally now able to be truly client based. The systems themselves have great new technology that allows things like new product introduction to get done faster. You can get at information without necessarily having to go through a programmer. These technologies, I believe, are significantly changing the relationship between insurers and clients. The thing that I tell agents is that they have to understand that they're going to have to be providing a different value added service to their clients because insurance companies are really now, for the first time, able to do many of the things that, up until now, only agents had been able to do.

I'm going to talk about a few of these technologies, and some of these you're probably very familiar with. I'm sure you all use the Internet. It is a phenomenon. It is basically unregulated. It's a global network of networks with its own standards, its own language. It's very easy to get access, and I'm sure you all know that you just need a computer with a modem and a dial-up line or a direct line. You need an Internet provider like AT&T or America Online or IBM, and you need some kind of browser like Netscape or Microsoft's Internet Explorer. That's how you get into it. If, however, you want to actually go out there and make your statement on the Internet and put something out there that other people look at, you don't need

anything else other than those exact same things. To prove my point this is my son's Internet site.

It has been seen by about 35,000 people. He did it when he was 15 years old. This is his 15-year-old view of what's important in the world. There are his heroes and who he thinks are the villains in the world.

Getting access to that information on the Internet does have its challenges, though. There are all kinds of search mechanisms. This is Yahoo. My daughter who's 11 years old uses Yahoo all the time. She took Yahoo, and she keyed in the word "toys." She got back a screen that said there was something like 150,000 hits on the Internet for toys. These were the top 12. Ten of the top 12 sites with the word toys in it were all about sex toys. That's the kind of danger of the unregulated Internet. So just a caution for those who have children: It is easy to get into some of this stuff unknowingly.

With regard to business use of the Internet, large corporations are lagging behind individual and small company users. In the insurance industry only about 3% of insurer Web sites are transactional. Bank Web sites are about 33% transactional, meaning you can actually go out there and transact business. In the brokerage world about 20% of them are transactional. Conning & Company predicts that Internet sales in the insurance industry will reach \$1.1 billion by the year 2000. It took 53 years for electricity to go from invention to being used by the masses. It has taken the Internet only seven years. It is now used every day by 100 million people. So it is going to become the way that we do business in all kinds of things.

Nearly every insurance company today has a Web site. As I said, most of these Web sites right now are not transactional. New York Life lets you go out and actually set up your own personal folder where you can accumulate some information. Most of the rest of their Web site is informational: here's what our building looks like; here's our history; here's the kinds of things that we sell.

Some companies are beginning to do electronic commerce. This is Pacific Life's Web site. You can say to them, "I want some more information about retirement or life insurance or estate planning." They ask for your name, your address, and your e-mail address. So what you're really doing is sending an e-mail message, and then somebody gets back to you and gives you some information over e-mail. Some companies are beginning to really engage their customers. TIAA-CREF is a company that's doing that. If you have an account with TIAA, you can give them your password and your account number and actually look up some of your account values for items that you've bought from them.

Concerning direct customer interaction, this is Met Life's Web site. If you want to do some relatively simple transactions, like a change of address or a change of bank or a change of beneficiary, you can pull down their form and print it off, fill out the form, and send it back to Met Life. Now, obviously, the next step is to actually fill it out on the Internet and just e-mail it back to them, but it's beginning to engage you in doing some things with them directly without an agent being involved. Consecro is one of the first companies that's actually doing direct selling and servicing on the Internet. You can go out on Consecro and buy an annuity. You can give them your credit card number or your checking account and actually purchase an annuity from Consecro. Now, I'm not familiar with how successful they've been with that. I think it's a lot to ask somebody to buy an annuity and give \$10,000 over the Internet for an annuity, but once you've done that you can go out with a password with them and actually interact with them and find out some information about the annuity.

There are also companies out there like Quote Smith, that are beginning to do some things in the insurance industry. They will make the buyer of insurance very powerful just like the automobile industry is being transformed by getting information about what cars really cost into the hands of the buyer. I went to their Web site. I said I wanted \$100,000 of insurance. I'm a female nonsmoker. It gave me 156 quotes of what that would cost for me, including the name of the company, their A.M. Best rating, what their guarantee period is, and the one-year cost and the 10-year cost. And, interestingly, for those of you who follow the Weiss ratings, up until a few months ago they gave the A.M. Best rating and the Weiss rating. They recently took the Weiss rating off. There are 156 companies. The lowest price is \$223. The highest price is nearly \$2,000. Now, think about that company with a price showing \$2,000, and the power of knowing that is now in the hands of that client.

I think electronic business is going to transform the insurance industry in several very fundamental ways. The organization of the industry will change. We always used to be organized for the most part by region and city and geography. This will go away. It doesn't matter where you are in the world when you have access to the Internet. The balance of power will move from the sellers to the buyers. When I know what your price is compared to what other companies' prices are, I'm now armed to ask some of the right questions, just like I'm armed when I go in to buy a car now. And this knowledge of what the price really is will inevitably mean lower prices and margins. I believe all of that, along with some of the other things that Hank had talked about before, will mean some really profound changes to the distribution system.

The agent's role will change significantly. They will have to figure out a different kind of value to provide. For example, going back to the Quote Smith descriptions

(the range in price from \$223 to \$2,000), you all know what some of the differences probably were. Those \$2,000 premiums were probably guaranteed issue, nonconvertible policies. This is information that was not on the Internet. That's important information that agents can continue to provide that is vital to the sales process. The Internet isn't able to do that very well just yet. I don't think that agents will go away, but there's going to be a difference in the kinds of things that they'll provide to clients. And certainly in the complicated markets, in the big estate planning kinds of markets, the agents will be there for quite a while. The Internet can provide data, but you need to know what you're looking for. So my pitch to agents is that they will have to change their role to complement the Internet.

That's a bit about how the world's changing for customers, but these same kinds areas are also available to the agents, too, via an Internet. The kind of information that I have at my fingertips through Mutual of New York's company Internet is extraordinary. I can get any kind of form, any kind of policy, procedure, or training material. Just about anything that I could possibly want I can pull down at home or any place that I happen to be, via the Internet, over the Internet in a secured manner.

I want to mention the subject of customer relationship management. As I said, companies are beginning to understand that customer service is important and that managing that relationship is very important. One of the things that I'm sure you're probably all dealing with is multiple administrative systems for the products that your company has, all of which have the name in different places and the address spelled differently. Companies have been dealing with this kind of problem for a number of years. Finally there's technology in place that takes these multiadministrative systems and front-ends them with client views. These technologies really do exist today so that to the customer and to the service person it really will be one front-end. Behind it there'll be multiple legacy systems, new systems, and old systems, but the person being presented with the information will see it in one format in one way.

Customers will access call centers. If any of you don't have these now, you will soon have them. Call centers allow companies to prioritize calls, so that when a call's coming in you know who the client is, whether they're an important client to you because of the amount of business they have with you, or whether they're a problem client. The call center technology will allow the routing of calls directly to the person who needs to deal with the caller. It will allow everything from upping the priority of the call so the caller's not waiting (because they happen to be one of your important clients), to funneling it to the exact person who has the knowledge that that person's going to need.

Data warehousing and data mining are concepts that Hank had mentioned. One of my frustrations in my early years with computers is that every single computer carried the same data but in different kinds of formats. Data warehousing is the process of gathering the data that are being generated by all the computer systems in a way so that one name appears consistently in one place or so that you can gather information about your annuities, your security business, your traditional insurance business, and your variable business and be able to look at it in one way. The thing that I find most intriguing is the concept of data mining.

When I was a programmer, I was asked to get some information for a user client from the computer. They would need to tell me exactly what they wanted to know. "Tell me the number of policies that are in this particular state that are sold by this particular agent." They had to know what they wanted. Data mining is a technique that is in place now in companies that "mine" the data to figure out the trends that are going on in those data and to tell you what you should be asking about that data. These are very powerful techniques that are now coming into their own. Data mining will mine the data that exist in the company today and offer leads, for example, to agents of the kinds of clients they should be soliciting additional business.

Let me briefly discuss the agent's desktop. In the same way that home office people have dealt with multiple systems, agents have dealt with multiple systems in their offices. There would have been a system for prospecting, a system for their client file, and a system for their illustrations. And there would have been other systems, some of which were on paper, for doing applications and sales presentations. Data would have been inputted multiple times into all of those systems.

Mutual of New York is an example of a company that now has a fully integrated desktop in place for its agents. With this system I sign on to the network with this laptop no matter where I happen to be. They download to me overnight anything that has happened with any of my clients from a securities business point of view, an insurance business point of view, whatever it happens to be, and put it directly into my client file so that if I then want to use that client file to do any kinds of mailings, I have those data already in place. Among other things, their next steps are going to be that once I have that data in place, I no longer have to key them in for anything else, for example, electronic applications. The systems that are coming will allow everyone, not just the home office, but the agents themselves to get data once and never have to key them again. If I'm now ready to take an application, I already know the face amount because I did some needs analysis. I know the name. I know the address. I know the kind of benefits that the client needs.

Hank and Mike have both talked about the evolving application process. I want to comment about the near term. This is what nearly every insurance company is talking about doing near term, meaning they're working on it right now to implement within the next year or two. It's basically a two-part process. The first is a needs interview on paper, although some companies are starting to use the Internet and starting to use electronic but it's some type of front-end short application that then gets sent to the home office. The remainder of the information gathering is then done by either home office or a third-party vendor. That is where the underwriting interview will be done, to get the rest of the application information. When it's gathered, it will be taken electronically, with the computer prompting the interviewer to ask the appropriate questions. For example, let's say the client just said to me that they have diabetes. I'll now ask the client additional questions about its onset, what medications they're taking, etc., so that underwriting can get very smart information from the client about what their impairments happen to be.

Data, as much as possible, will be electronic. Everything will drive toward electronic, and you heard some of the ways today. We will be using more and more public information rather than self-disclosed data, examples include pharmacological data and MVRs. Because that public information is electronic, we can get to it quickly and cheaply, and we can analyze it. Connections will be electronic rather than via mail and fax and phone, again for the reason that we can get it quickly. And you'll see more and more use of expert risk analysis in some kind of form. There are different levels, from the Lincoln system to the less sophisticated systems, but everyone is going to some form of risk analysis through expert systems.

In summary, I believe that insurance companies are developing the infrastructure that's allowing them finally to provide much of the value added that agents provided for their companies. Agents should start worrying about their livelihood because somebody's going to start talking about commissions. If you're not doing as much, why should we pay you as much? Why do we need you at all? Customers are having rising expectations about technology. If I can do their banking electronically, why can't they that their insurance company, too? So, in short, the world is changing from an underwriting and agent's point of view, and it's changing very, very quickly.