

>>FEMALE SPEAKER

Well, thank you for returning and attending to the FTC's hearing on the evolving IP marketplace. I am Suzanne Michele the Assistant Director for policy here. This afternoon we will be talking about the role of technology markets and patent markets to diversified manufacturing companies and in the life sciences industry. We are I believe webcasting these sessions this afternoon and our sessions tomorrow. Our sessions tomorrow will address economic perspectives on IP and technology markets and we will have some of the leading academics and economists thinking about those issues. Our next session and the press release will go out today will be an April 17. We will be looking at some of the newer developments in patent markets and we will have the CEOs of Ocean Tomo (ph), Acasacia (ph), Think Fire and some academics who have been thinking about this and some people who have to live within these systems talking about their experiences with secondary patent markets. Our final hearings in this series will be on May 4th and 5th in Berkeley. We are being hosted by Berkeley Center for Law and Technology. We will be covering many of the same issues that we have covered throughout the hearings in DC within those two days. We welcome all comments. Feel free to call any of us. We would like to hear from you. In addition, the FTC has the record open so that any member of the public can submit comments on any of the

topics we are discussing. We will leave that open until May 15th so people can comment on the sort of issues that are coming up on these hearings and then we will have to close it down. And buckle down and begin working on our report. So thank you very much. I'll turn it over to Armondo to introduce our panelists.

>>MALE SPEAKER

Good afternoon. I'm Armando (inaudible) counsel for Intellectual Property at the Commission. This panel is manufacturing and diversified industries panel. We have a distinguished group of panelists representing some of the better well-known companies that make the products that we are familiar with. We will begin with Gary Griswold. He is a consultant to 3M and until recently was the president and chief intellectual property counsel of 3M Innovative Properties Company. He has practiced intellectual property law at 3M and also at DuPont for over 34 years. He is a past president of the intellectual property owners group and the American Intellectual Property Law Association. He is a member of several other professional associations where he has held leadership positions. He has been a member of the US Secretary of Commerce Industrial Function and Advisory Committee on intellectual property rights for trade policy matters and an alternate member of the US Secretary of commerce advisory

commission on patent law reform. Next on the panel is Carl Horton. Carl is GE's chief IP counsel. He joined GE in 1992. Prior to becoming the IP counsel Mr. Horton served as lead IP counsel for GE's healthcare business where he was responsible for all intellectual property matters. In the past 12 years, Mr. Horton has led IT teams in over ten countries in protecting a wide range of products and services for GE. Mr. Horton was lead IP Council on over 40 acquisitions ranging in value from \$10 million dollars to over \$10 billion dollars as well as the lead Internet IP counsel for countless IP disputes. In 2008, he was featured on the cover of IP Law and Business Article top 50 under 45. He is on the IP Board of Directors and chaired its US law patent committee. Steve Miller is Vice President and General Counsel intellectual property for the Procter & Gamble Company since 2001. He joined Procter & Gamble in 1984. In his position he oversees about 150 patent and trademark attorneys worldwide and advises Procter and Gamble's senior management on intellectual property issues. Mr. Miller has authored numerous P&G patents and has been involved in license agreement, acquisitions, interferences, arbitrations, and litigations both in the United States and abroad. Mr. Miller is currently president of the Intellectual Property Owners Association and the IPO and on the board and committees of several other professional, locational and academic organizations. Richard Phillips is the chief intellectual property

counsel of Exxon Mobil chemical company and he began employment in Exxon Mobil in 1982 and held positions in various Exxon Mobil affiliates and ventures prior to assuming his current position in 1998. His began his IP career started with Caterpillar in Illinois. He also worked for a year as a field engineer overseas immediately after getting his law degree based on the theory that it would be a lot more fun than practicing law. According to him, it was not. Mr. Phillips is a member of the IPO board and is active in other IP related associations. In the IPO, he serves on the board of the education foundation and is active on the Amicus committee. Before I introduce our last panelists I just want to mention that if you saw the earlier agenda, Bill Coughlin president and CEO of Ford Global Technologies, was supposed to be on this panel but unfortunately he could not be here with us today. But instead he sent a very able replacement in the person of Jennifer Steck. Jennifer is intellectual property counsel for Ford Global Technologies a wholly owned subsidiary of Ford Motor Company responsible for all intellectual property matters across Ford's worldwide enterprise. She manages Ford's patent litigation as well as patent and licensing matters related to Ford's technologies. Prior to joining Ford in 2000, she was counsel at another automotive OEM and also practiced intellectual property law at a Detroit area intellectual property firm. We will now begin with introductory remarks which panelists will have about five

minutes to make introductory remarks and why don't we will begin with Gary.

>>GARY GRISWOLD

Thank you. Thank you for the introduction and as was mentioned I am now somewhat retired, but actually not totally retired. I am here I guess on behalf of 3M. Thank you for having these hearings. I think it will be very interesting. I listened to part of them this morning and it was good. Just speaking from 3M's perspective, the patent system is a very significant issue for our company. We own -- a patent portfolio of more than 6,000 issued patent -- US patents. We have a long-standing commitment to protect our research and development investments, which totaled \$1.4 billion last year. We have resulted in many innovative inventions and products. 3M's business interests are extremely diverse. We sell over 55,000 products in six different industries segments. They range from industrial products like sandpaper and adhesives, consumer products like Post-it notes and Scotch tape, safety and security products like RFID tags and readers and respiratory masks. Display and graphic projects like optical films for computer screens and reflective sheeting for road signs. Telecommunication products like optical fiber optic connectors and healthcare products like stethoscopes and dental implants and medical

billing software. Just as an aside I actually managed the dental business for six years. That was a division of the operation of the company that makes me unique in the patent circle. One thing 3M does very well is it takes technology from one industry, for example, abrasives and puts it to work in another industry like dental. We did that. That's why the patent system is very important to protect those inventions because once we have done it then other people say oh gee we can make that connection. Bottom line is 3M is very interested in making sure we have a strong patent system and that we often are on the offense in asserting our patents, but not always. Sometimes we are sued for patent infringement, so we would like to see a balance to patent law. And that's why we have operated in the debates that have continued on patent reform.

>>FEMALE SPEAKER

Thank you. Carl.

>>CARL HORTON

I want to thank the FTC for holding these hearings and allowing GE to come in and give our thoughts and opinions and perspectives on the issue of Intellectual Property. It is not only important today that will be increasingly more important particularly in the environment like we have

now. I thought I would get a 60-second version as well as Gary did, about what is GE. It is not surprising the quintessential conglomerate we have a lot of different businesses in different spaces. I break it down by starting with the technology pieces of it and that is what we call the infrastructure business and that implies products necessary to build out the infrastructure of a country so you would start with energy and supplying energy as well as the oil and gas, equipment and pipelines that feed that. We get to transportation segment where it is aircraft engines and avionics as well as the rail systems that move products from one end to the other. Finishing that up with security and water. Then we move to another industry segment, which is healthcare also a significant business although only about one third a side of the other but still \$17 or \$18 billion where we are predominantly a diagnostics company. All of the equipment and life science tools around the diagnostics as well as information technology within hospitals and other healthcare infrastructures. Third is consumer and industrial business. Products that people tend to know a little better, lighting appliances and things like that as well as lesser-known products along the electrical infrastructure pipeline. Once the energy is generated anything that is necessary to get from the generation side back into the home or an office building or a plant as well as the safety of electrical infrastructure of the company and factory automation and the like. Finally,

one of our other technology or investment intensive businesses is NBC-Universal where we are a broadcast company, a media company as well as a number of different cable channels. Finally the part of the company we don't like to talk about in today's environment is financial services. It was a very good part of our company and now a lesser part of our company, but still very significant. We are in consumer and commercial finance. With that as kind of the backdrop, you asked a main question around the uses of IP. As I look at our company and the companies within our company, we break down the uses of IP in three big categories. Offensive, defensive, and facilitative. Not surprising we see a correlation in those businesses that tend to use it offensively or those that invest most heavily in R&D or invest heavily in the content side which is for NBC-Universal and where the degree of predictability and unpredictability is the highest. Where you have that kind of business model you need very strong IP rights to guarantee you will get a return on the successful investments sufficient to make up for the unsuccessful investments. And we have those that are defensive where I think that the R&D investments are little lower and predictability is lower. Therefore you have a lot more competitors. The products tend to be commoditized and we tend to build our portfolio primarily with gaining some competitive advantage for the features that we may put forth in the market first. For the most part I would

say that they are structured around the IP as more of a defensive model. For all of GE, the IP services a very valuable function in being a facilitating force in collaboration with third parties, joint ventures and joint development. It is a tool that enables us to do more business with more players in an open and collaborative fashion. With that as kind of the backdrop that is how we view IP. On balance I guarantee that we see IP as a very strong motivating force to drive innovation and investment in R&D and a strong factor in preserving American jobs because it's one of the few defensive tools we have left to keep those jobs in the US and keep the low cost would be copyists or fast followers, if you want to call them that, from taking over where we have invested and driven forward technology and innovation.

>>FEMALE SPEAKER

Steve.

>>STEVEN MILLER

Thank you Suzanne. Thank you for inviting Procter & Gamble to participate. 3 billion times a day Procter & Gamble brands touch the lives of people around the world. We have a strong portfolio of trusted, quality, leadership brands including Pampers, Tide, Panteen, Bounty, Crest,

Delay, and Gillette. The P&G community includes approximately 138,000 employees working in over 80 countries. Business Week in 2008 selected P&G as the world's eighth most innovative company. While many associate innovation with computer companies rather than computer products companies that association is too limited. At P&G, innovation is our lifeblood. Innovation is everything we do that improves consumer lives and improves the value consumers get from trusting P&G brands including new products and packaging designs to improvements in supply systems and organizational productivity. P&G invests over \$2.2 billion per year in research and development and we employ over 8900 scientists in 29 research centers in 13 countries. Patents and trademarks protect this investment in R&D as well as insure P&G maximizes its return on its investment. Without strong IP protection the value of our brands can be significantly diminished. Competitors would be free to copy our technological and commercial innovation without making the same investment or incurring the same risks. IP provides us a competitive advantage that leads to increased value for shareholders and improved products for consumers. P&G maintains over 36,000 active patents worldwide and over 110,000 trademarks worldwide. Traditionally P&G success resulted from internal invention that led to innovation. In 2000, our CEO challenged the company to reinvent our innovation business

model. He understood that that the key to future sustained growth was a new concept of open innovation leveraging one another's innovation assets. He made it a key strategic goal to acquire 50 percent of P&G's innovation from outside the company. This year we will exceed that goal. Through our connect and develop innovation model, R&D productivity has increased by nearly 60 percent and our innovation success rate has more than doubled while the cost of innovation has fallen. An important learning from our connect and development program was the realization that innovation was increasingly done at small and midsize entrepreneurial companies, universities, government labs and by individuals. These entities were eager to form partnerships with industry and to license and sell their IP. One critical aspect of this program became the ability to create and optimize the value of IP for both P&G and its partners through sale licensing or alternative means of commercialization. We restructured our thinking on ownership and utilization of IP to better benefit all parties. In licensing of technology provides P&G with access to others' IP to accelerate P&G's innovation. We do much more in licensing of technology than we have ever done before. We also out license P&G's internally developed IP. The out licensing program results in a source of revenue, decreased costs, and new opportunities for licensing joint ventures and strategic alliances. Over \$3 billion in sales by other companies is powered

by P&G IP. In terms of patent litigation, P&G is typically about equally enforcing its rights against infringers and a defendant. Because we are in both positions, we take a balanced viewpoint on litigation. As a defendant, patent assertions have some effect on our ability to innovate and it diverts resources away from core research. However given the time and effort we devote to avoiding issues with other patent owners before we market our products, this is a minimal cost compared to the overall R&D budget. Rather than hindering innovation we often find that patents and patent litigations spur our competitors and us to find new and innovative ways to solve the problem by designing around the patented invention. Often leading to a better and cheaper solution for consumers. I look forward to discussing these issues in the roundtable Susanne. Thank you.

>>FEMALE SPEAKER

Thank you very much. Richard.

>>RICHARD PHILLIPS

Thank you very much for the invitation today. Exxon Mobil probably needs no great introduction. We are an integrated oil gas and petrochemical company. We use innovation and technology to find, develop, produce, refine, fuel, lubricants and petrochemicals in over 140 countries of the

world. Research and development is key to our existence. We invest more money in R&D than any of our other competitors in any nation of the world. We use that technology not only in our own operations but we licensed dozens of our competitors in dozens of countries to use technology we have developed. But for a strong patent system in the US, much of that technology would not be developed or if developed would not be licensed. A strong patent system is key to us.

>>FEMALE SPEAKER

Jennifer. And thank you for stepping in. We appreciate that you are here.

>>FEMALE SPEAKER

Thank you very much and thank you for inviting Ford to participate. As with the other companies, patents are important to Ford. I don't think Ford needs any explanation in terms of its products. We've been divesting everything that's not core to automotive. In that regard, we have been focusing on improving the technology and fostering innovation in our vehicles. Part of those activities and our R&D patents in the IP system are important to us. First of all they help us protect hard won inventions and help us to encourage our inventors and engineers to keep inventing and come up with new ideas and be rewarded for their contributions. They

also help us leverage that in estimate in joint ventures and other kinds of relationships that we have with others. And it's a way for us to get value and bring equity into a transaction in order to get something back. We also use patents to help support our brands and our advertising. We have been advertising patents that we've obtained in vehicles and we use, like everybody else use patents for defensive reasons. Ford each year files about 500 to 600 applications each year in the US on inventions that we make in the US and well as additional patents on inventions made overseas. We have very active licensing program and bring in tens of millions of dollars per year in licensing technology. Not just patent, software and know-how and all those other kinds of technologies. We are called upon frequently to defend against patent infringement allegations. We also enforce our patents. Most recently the enforcement of design patents in the ITC on body panels.

>>SUZANNE MICHELLE

Carl gave us a very useful framework when talking about the offensive use and defensive use and facilitating use of patents. Steve, you talked a lot about Procter and Gamble's program of reaching out to bring technology into the company. Can you elaborate more on that and how it is going? Is that successful? Is that a successful program? Do you see it continuing at

P&G?

>>STEVEN MILLER

It will continue for a long time. I think I cited some stats in my opening statement, but it has actually reduced our cost of R&D. We are making more connections and bringing more products to the marketplace than we ever had at a faster rate. I am proud to say that many of the folks on the panel are my suppliers. We have reached out and we have worked with them and we have used the expertise and the knowledge that they have in the intellectual property they have and bring that together with ours and one and one make three or five instead of two. I think this has been a huge benefit, but it would not happen without intellectual property. If each side wasn't able to bring and protect what they bring into the relationship and then we manage how IP comes out of the relationship. There would not be any incentive for anyone to get together. We would not be able to take that risk because others could come in and exactly duplicate what we do quickly without the risk and the money that we put into it.

>>SUZANNE MICHELLE

You are talking about bringing in technology from both larger companies and then in your opening statement you talked about startups and

universities. Does the process work any differently depending on who you are dealing with, a startup versus --

>>STEVEN MILLER

Not really, other than the sophistication of the party. We found that small entrepreneurial companies, universities and even the government is very receptive, that we have all heard over the last 10-15 years about monetizing your IP assets. That word has gotten out and they want to partner with good partners and in our case and I know in the other companies case they know how to market products, bring things to market quickly with their expertise. So usually the small entrepreneur can get their product to market much more quickly by partnering with a larger company. It works extremely well, just as well as with the larger companies.

>>SUZANNE MICHELLE

And I will say that any panelist that wants to comment, just turn up your table tent and we will call on you and we will throw out more questions. Steven, I want to follow up for just a minute because this is such an interesting and important area that we have been hearing about from a lot of different angles. This is our first I'm hearing about it from the large company perspective. When you are thinking of bringing in new

technology from a start up, how do you filter through the different possibilities that are out there or identify a promising technology? Are people bringing you a lot of offers? How do you get to that?

>>STEVEN MILLER

It's a little bit of both which is really great because of the connections we are able to make both with the large companies and small companies and individuals and how many people are now willing to bring things to us as well as us going out and searching the marketplace for those ideas that we think will work. By them bringing it to us it is often things that we have not thought of before. To give you an example, Mr. Clean Magic eraser, which I hope everybody has seen or used, which is an idea that was in Japan that someone found and came to us and said would you think this is a good idea. We were able to bring it to market very quickly based on that. It is those connections that normally our researchers would not make that says we can combine that with Procter & Gamble technology and make this even better for the consumer. That is happening faster and much more efficiently because they know we are willing to partner and give them a win-win situation. They can own some of the intellectual property or they can be licensed out. So they will get revenue from using their technology.

>>SUZANNE MICHELLE

We have often heard from independent inventors and startups I could be very hard to get their foot in the door of the large company. Partly because of the large number of these offers that a big company might get and how to think about it. Do you have any ideas or comments on that problem? Do you just have people who filter through all these ideas that come in and try to find a good one? Or some other mechanism?

>>STEVEN MILLER

The problem is everybody thinks they can invent detergent or a diaper, but they don't realize the high-tech that really goes into the products. For every one idea that we would accept there are probably 1,000 ideas that we don't. So it does go through a strong filtering process. Our people still look at all of the ideas because no idea is a bad idea. There may be one that fits. It can be difficult, but I think and I know some of the other companies here you change the culture from a not invented here culture where everything has to come from your own laboratory to, boy, there are some pretty smart people out there and they have great ideas that they can bring to us. When that happens, you make more and more connections and those better ideas tend to flow in.

>>SUZANNE MICHELLE

Okay.

>>MALE SPEAKER

P&G's program has received some cooperation, we are aware of it and it has a website and I'm wondering if the other companies are thinking about doing some of the same things or similar things or have something in place already.

>>GARY GRISWOLD

3M has historically operated with outside ideas a lot. Most people would think that we don't because we tend to have a reputation for substantial internal innovation. Actually we have that, but we also -- that tends to be stimulated by these outside ideas. Actually many acquisitions that we have when they come into the company they want to stimulate a whole new area in our researchers in connection that would not have happened before. That happens with individual ideas that come in. We are a supplier to P&G and one of these companies that works with them cooperatively. It works well because we have certain expertise that P&G does not and we want to make sure downstream that we have the ability to operate our business the way we need to because we are using that

technology broadly and P&G wants to be able to operate effectively with us in cooperation so it helps to define the relationship. The patent rights are very helpful in defining who does what, how the cooperation works and organizing the whole function. It is a really good way for companies to get together. That is what we do.

>>SUZANNE MICHELLE

Carl you also mentioned using patents.

>>CARL HORTON

Along the connect and develop front I say we run a full spectrum from our more consumer driven businesses, a little more commodity style. We tend to have a collaborative approach and not nearly what P&G has experienced. On the other end what we talk about is jet engines and we don't get a lot of help in that area. In the healthcare space, we see a fair amount of activity and it is largely the way that model evolved. We take in technology in the life science space where people go out and do research in labs all over the world and then with the equipment that we put in the hospitals, we create some sophisticated equipment that university professors, doctors, tinker with and find better way to use. They put it into practice and develop new technologies and processes using that

equipment that we then license back in and make it part of our standard operating procedure and push back out again. There is a fair amount of collaboration.

>>SUZANNE MICHELLE

All right. Any thoughts on using patents to facilitate joint development cooperation agreements, bringing in technology from outside the company?

>>MALE SPEAKER

We have a slightly different angle on this. Our business is very different. We are largely a resources business. Most of the world's resources in oil and gas are owned by governments, not private entities and it is almost impossible for any private company to own those in another country. The way we get access to resources overseas, in most countries of the world is by doing a venture of sort with a government or quasi-governmental entity. The way we get access to that is through three things. We present ourselves as being more talented from the standpoint of managing huge capital projects. We can bring the capital to those projects but the third advantage we bring is technology. The thing that makes Exxon Mobil and some of the other majors a very attractive partner in many parts of the

world is that we can bring a technology of -- a package of technology to find, produce, and deliver at low cost and an environmentally safe manner resources that governments acting on their own could not produce. They may have the money, but don't have the expertise. That's where the patents come in. Most of the countries in which we operate do not have effective intellectual property systems. That's a fact of life. If you're going to operate in parts of the world, we don't need to name countries, you will not be able to protect your intellectual property there. But I must be able to protect it in the United States. I must. To the extent that I disclose technology in some parts of the world that necessarily will come into the public domain I need to be able to protect it in the United States, Europe, Canada, Japan and Korea. To the extent we have an effective patent system that gives me, Exxon Mobil, a stronger tool to get access to these resources that our country needs.

>>MALE SPEAKER

Why do you say that you must protect them in the United States if they are not going to be effective in using them in other countries?

>>MALE SPEAKER

The United States, of course, is itself a very large market for hydrocarbons.

To the extent that people are actually producing hydrocarbons in the United States or importing them into the United States, I can use the US patent system to protect our position. It creates a greater incentive to me than would otherwise exist to invest money in R&D to protect technology at least in those parts of the world with an effective intellectual property system. Imagine a world in which the United States did not have an effective intellectual property system. What advantage is there to Exxon Mobil to invest in \$1 billion per year evolving new technology for finding oil inexpensively, if that can be disclosed to and used by our competitors, not just in the Middle East, but also North America?

>>SUZANNE MICHELLE

We talked about licensing in, what about licensing out technology? Is that an important mechanism for partnering or just for bringing in licensing revenues to your company and what are some of the concerns that you face in licensing out your company's own technology?

>>MALE SPEAKER

I can start that. We did not license out that much, 3M did not for many years, but in the last I would say eight or so years we have done a lot more of that. The benefit has been that certainly we put to work in investments

that we've made in the past and they converted into intellectual property. That was valuable and we got return on that. That was very good. The other thing is when you license someone else to use some of that technology, you wind up developing a relationship that leads to another relationship and perhaps we wind up with a joint collaboration with leads to more technology development. It spurs relationships that have been very helpful. The whole concept of monetizing assets or putting to work asset that you don't use has been very helpful to our company. The reason we did not do it so much in the past is because of what I mentioned earlier, is that we tend to put IP to work that is developed in one area like abrasives and then we use it for dental filling material somewhere else. We don't know it might wind up in another area and they are cautious about licensing it out -- or working with it in another area where we might want to put it to work over here. You have to be careful. But it has been very helpful and very good to us to do more licensing out in our revenue and that area has jumped dramatically.

>>SUZANNE MICHELLE

Okay. Carl.

>>CARL HORTON

We license out and not infrequently, but I think if you would look at our total patent portfolio, we are about 18,000 active patents. There are far more that are licensed to competitors and business partners than just licensed out for cash. That is a primary source of establishing some of those relationships. As Steve mentioned earlier, without the clear parameters that the intellectual property gives you, it is hard to enter into those transactions to know that I bring X and Steve brings Y and together we can go and venture in a new space knowing that I have a certain amount of protection to cover what is important to me and he has adequate protection to cover what's important to him. That is the kind of certainty we need to enter into that relationship. Absent that, having those clear boundaries and parameters and giving us some degree of control over our future, in the end it is knowing that we can control our future that gives us the confidence to take that step forward in an unknown direction.

>>SUZANNE MICHELLE

Steve.

>>STEVEN MILLER

In the out licensing it is as Carl said, it's a lot about those connections. To give you an example, we invented some enzymes that were useful for

detergent. We thought they were only good for detergent, but somebody came and said we would like to use those to clean contact lenses. So people see your patents, they see your technology, they realize there is another use for that technology, and then you can help the consumers, the public by been giving that technology for a different use. That you would not have thought of or even thought about commercializing in the first place. It is a win-win for everybody. We get new to the world products that we never thought of, but that we are also rewarded for that innovation in making the new technology.

>>SUZANNE MICHELLE

Jennifer.

>>FEMALE SPEAKER

Ford does substantial licensing out although we don't call it licensing out, we call it technology commercialization because in our view that's what it is. It is more than just bare patent licenses. It is bringing technology that we have developed to others for various reasons. And one is for income. The other is we have been able to do it -- this kind of thing to improve relationships. We have a new program with minority suppliers where we try to help them by making some of our patents and intellectual property

available to them. Another way that we reap benefits from that is through improvements that others that licensees might make to technology. For instance, we have some base night vision technology. Night vision is something that has not quite made it into vehicles. By licensing it out, we take rights and improvements back so that applications for night vision which might be security systems or those kinds of things might foster improvements that ultimately we can use some day if they end up implemented in vehicles.

>>SUZANNE MICHELLE

Richard.

>>RICHARD PHILLIPS

Folks talk frequently about monetizing existing IP. It's important to remember that IP promotes not only transferring technology you develop for your own use but also many companies, including Exxon Mobil, have businesses that themselves are developing and licensing technology not necessarily technology that you use commercially. Exxon Mobile, many of our competitors, have built centers of expertise that have become very, very powerful research engines. We run that engine, develop technology, and license that technology to other companies, some of our competitors

even where we don't use the technology ourselves. We invest money, we transfer the technology to somebody to help them be more profitable and we get some cash back and everybody benefits and consumers get better products. It's not just monetizing existing intellectual property, it is also patent system a driver for developing technology even where a company may not use it itself.

>>SUZANNE MICHELLE

In that scenario, when the initial thinking is done about going down a particular F&D path, is it part of the thinking from the beginning, we may license this out and not develop it ourselves or is the thinking in the beginning, this is something we might want to do, but then you get farther down the line and for whatever reason decide to license it out.

>>MALE SPEAKER

In our case, we never set out to create technology that we don't intend to use, but oftentimes we will create technology that for whatever reason we decide we are not as well-positioned as a competitor may be to use. Once we develop it, we say if we invest another \$100 million in this technology we can make \$200 million. We get a group of scientists with great expertise in developing technology that is used by other companies but not

by Exxon Mobile, but we are making money on it.

>>SUZANNE MICHELLE

Okay. Carl.

>>CARL HORTON

I would add to that the other phenomenon that takes place very frequently is we are faced with a problem and we don't necessarily know what the winning solution will be so we invest in multiple different R&D efforts not knowing which will be superior at the end of the day, but you have to see them to a certain degree before you can make that determination.

Ultimately that leaves you with three or four or 5 or 6 areas of technology that weren't commercialized because you pick the one best and went forward with it. You are left with an investment -- a sunk investment in R&D and those areas. Naturally you look for ways to find applications where it could be used or license it out to others in other industries or within your own industry.

>>MALE SPEAKER

Just one point on that. When you get done with all this, all the R&D we are talking about, you have notebook records or you have some record of this

but really when it gets down to it, the thing that turns that into real return is the patent rights. If you don't have the patent rights, you can have notebook records, the information in people's heads, but you don't have assets to put to work and define what you have done, it is not easily transferable. There are trade secrets that you can transfer and do that sort of things. The patent rights are the key ones.

>>SUZANNE MICHELLE

How does what we have been talking about differ from what Carl called the offensive use of patents? Using patents to maintain an exclusive position or an exclusive feature with regard to your own technology developed internally? Is that something also that is important to your company, maintaining exclusivity? And how do you use your patents in that context? Is it important to be clear that you are willing to go to court if necessary?
Gary.

>>GARY GRISWOLD

Absolutely. If you are not willing to enforce your patents, then over time you have a reputation that people get closer and closer to your inventions and pretty soon what you have developed is not valued by others. It is important to enforce your rights. No question about it. It is also important

if you are, as some of the others have talked about, willing to license those rights in different uses. It is also important that people understand that so they know they can collaborate and you can get the leverage of other companies putting to work your technology in areas you would not put it would work in. The willingness to enforce is important.

>>SUZANNE MICHELLE

Okay. Defensive use of patents. We heard earlier today about the IT industry maybe perhaps buying or developing patents that to be able to use a portfolio defensively if someone else charges that company with patent infringement. Does that happen? Does that dynamic play out in your companies and your industries? That you acquire patents thinking or through internal development or purchase with the thought that I want this just in case someone comes after me. Trying to understand if it's an IT only phenomenon or if --.

>>MALE SPEAKER

I would say we tend to have more of a -- 3M has more of an optimistic look.

>>SUZANNE MICHELLE

Okay.

>>MALE SPEAKER

We tend to think more in terms of what can this do for us business wise and we have acquired patents in technology that have added to our -- helped our investment in developing the technology so that when we get downstream we have a better scope of protection for that technology against other people infringing. That would be more of a view of -- more of a positive view of the situation than putting together a portfolio for use as you described.

>>MALE SPEAKER

I think that the thing that we tend to do and a lot of other companies tend to do is they acquire patents to get freedom to practice or freedom to market. They don't acquire them to look for trading in the future. When we go out and we license or we purchased rights, it is because we think we are going to market something in the future that may be blocked by that patent or that we may be innovating into that arena. Now sometimes we don't and then we have that asset and we have to determine what we will do with it, but I don't think that strictly speaking we would acquire assets just to have them for trading purposes.

>>SUZANNE MICHELLE

Carl.

>>CARL HORTON

I guess the only two areas I would think that we don't do exactly what Steve described which I think is the vast majority of why we would license in or acquire patents is for our own access to market. Or in the life science space have acted as an aggregator of types for some patents that we did not necessarily practice, but that made it easier is for us to get the whole packet of technology to market because part of it involved licensing the underlying technology and people weren't willing to do that if they had to license it from 10, 12, 15 different entities. By aggregating it ourselves we essentially became a one-stop shop and rights and funds flow and went back to everybody who contributed to it. But we just acted as the go to market channel. The other time where we acquire without absolute certainty is we are looking first to market it is when you are going down those paths simultaneously. We may license in for several different patents not knowing which one will play out in the long run. We firmly believe that the most cost-efficient way to deal with others patents is upfront. Identify them early. License them in where you can't design

around them and make them part of your commercialization path knowing that at times you will license in more than you need, but if it is done primarily on a royalty basis and you don't commercialize it, you are only out the upfront money anyway.

>>SUZANNE MICHELLE

Okay. And what are your abilities to do that, to identify the patents up front and bring them in? How confident can you be that you have identified all the patents that you need and if you can't be, what are the problems that you face in doing that?

>>MALE SPEAKER

We have had reasonably good success I would say. There are very few of the litigations we can point to where we didn't identify the patents and maybe had some disagreement over whether or not they should have been entitled to the patent, the scope of the patent, that happens fairly frequently. But very few times where we did not see the possibility. Those break down into two camps. One where we think that the patent holder is straining interpretation of the claims well beyond reason, so we did not think it was an issue to begin with. But secondly occasionally you don't pick up everything. I think there is some minor differences between the

types of technology, the chemistry arts being the simplest because the convention is so clean and consistent throughout the industry. They are easier to find the right patents and the total number is probably a little lower.

>>SUZANNE MICHELLE

By that, when you say the convention is consistent, you mean the terminology within the industry. So you can tell by reading a claim what it covers?

>>MALE SPEAKER

Yes. Absolutely.

>>MALE SPEAKER

I wish I could hire you (laughing).

>>MALE SPEAKER

I have more trouble.

>>SUZANNE MICHELLE

And your -- the whole another Richard because I would love to hear about

his troubles. The other technologies you deal with, how does it vary?

>>MALE SPEAKER

There tends to be and in some areas we have a higher frequency of patents so there is a lot more to sort through. We try to automate as much of that as possible, but sooner or later you have to plow through them one at a time and read the claims and develop that certainty. And then software arts, it is the same kind of thing. The number is higher, but people tend to call things very differently. Each of us could describe it in a different way. The automated portion of finding the right prior art is a little more challenging.

>>SUZANNE MICHELLE

Okay.

>>MALE SPEAKER

In a company such as GE, which is so diversified, on the other hand in applying for patents and drafting that patent application, do you use different criteria that reflects the different industries that you are going to be using them in, different criterias for IT technology than for life sciences technology or is it just one big patent application pool?

>>MALE SPEAKER

We use the same generic criteria. How they play out within a different business or a P&L may differ and the amount they are willing to invest in IP based on the potential return may be lower depending upon the power, so to speak, that the patent would enable them over the long-term. We see differences in the amount they invest in IP, but we use the same general criteria to determine whether or not to file a patent application and same criteria in terms of clearance frankly to do the opposite review. The investment levels vary slightly but the approach is very similar.

>>SUZANNE MICHELLE

And Richard what is your conference and ability to be able to identify patents in advance and clear the rights when thinking about new products?

>>RICHARD PHILLIPS

I was poking a little fun at Carl and really unfairly. He is certainly right that those patents that cover a pure chemical are relatively, in this industry, easy to analyze. The challenge, of course, is that patent attorneys know that. A lot of our competitors don't draft claims in a manner that makes it easy for me to analyze. Most of our products are not individual chemicals.

We are not a pharmaceutical business. Instead consumes, if you will, of chemicals. Gasoline is not a molecule. It is many, many dozens of molecules. Oil is even more complicated. Polymer even more complicated yet. The challenge we have is that oftentimes some patentees will develop terms we call it parameteritis. Parameters that are not known and recognized in the industry. They will create a term and they will say we create a polymer and then I'll call and say we claim a polymer. We claim an axo-alcohol (ph), we claim a method of seismic stratigraphy that has some property that is not recognized in science. You are put to a cruel dilemma. Do you try to go in and understand that property? It may be very expensive to determine what the patent covers. In Europe and other countries there are pretty good systems for dealing with that, the patent opposition system. In the United States, I do not have an effective tool for testing the scope against the validity of a patent. That is a fundamental failing, in my company's judgment of the US patent system. No good mechanism short of litigation at the courthouse door for testing what a patent really covers.

>>SUZANNE MICHELLE

Would there be any other way to address that problem with in the PTO or within the examination process?

>>MALE SPEAKER

Re-examination has been in existence for a long time and generally we feel it is not nearly as level a playing field as the opposition system that many other patent systems have. We would favor a single-phase opposition system somewhat along the lines of what we have in Europe.

>>SUZANNE MICHELLE

Okay. Jennifer.

>>FEMALE SPEAKER

We have almost two distinct worlds in that regards. One is the strictly automotive vehicle world in which our business works. The other world is all of the things that we buy from others. We have a very difficult time with respect to assertions of patent infringement for purchased parts, not only purchased components that we might buy from tier one suppliers but even sub component of those parts. Things like microprocessors.

Accelerometers and it is almost impossible for us to go out and understand what the patent landscape is for all the various intricate parts that end up in a vehicle.

>>SUZANNE MICHELLE

Can you rely on your suppliers, the manufacturer of that part, to have been the party to clear the patent rights? Why does Ford need to worry about that?

>>FEMALE SPEAKER

We don't. We do rely on suppliers. The problem is when there is an infringement suit, the defendant is Ford.

>>SUZANNE MICHELLE

And explain why (laughing).

>>FEMALE SPEAKER

They think we have deep pockets (laughing). More importantly, it is very difficult for us to defend those kind of lawsuits primarily because it's not our core business. We don't have the expertise. We don't have prior art. It is a lot more cumbersome and complicated for us to get suppliers involved and get the real parties involved. I think their damages model usually starts with a theory that goes towards some percentage of the entire price of the vehicle, which is obviously very expensive.

>>MALE SPEAKER

Do you ask for indemnification from your suppliers in case their is a patent infringement suit that they indemnify you.

>>FEMALE SPEAKER

We do.

>>MALE SPEAKER

How does that work into this process when Ford ends up being the defendant?

>>FEMALE SPEAKER

Typically pretty good, but there is always -- everybody is always reluctant. There are assertions of infringement that the supplier might feel are unfounded so therefore they don't -- like we don't infringe and we don't want to defend you because this is clearly not covering our product. And there are instances like when you are on a rocket docket and it takes a long time to get those ducks in a row and get all the suppliers involved. Many times there are multiple defendants. When we get sued, typically other automotive OEM's and its enough of a struggle to get everybody together and on the same page early on.

>>SUZANNE MICHELLE

Will Ford and your supplier be in the same lawsuit then of multiple defendants? Will they go for both places in the distribution chain?

>>FEMALE SPEAKER

No. They don't want the supplier. They want us. Typically we will -- the supplier to the extent they indemnify us will pay for our defense and we will defend as Ford rather than jump in themselves as a defendant or intervene.

>>SUZANNE MICHELLE

When you -- I assume you have settled some of those lawsuits. In those settlement negotiations, how do you get to a place of damages and what kind of damages can you agree to and I am wondering how you talk about what the royalty base ought to be since it is the proverbial car we are dealing with in the damages calculation.

>>FEMALE SPEAKER

In our view, which is always different than the plaintiff's view, the value goes to the incremental improvement that that invention makes and not to

the entire vehicle. Sometimes it is difficult. There are things like safety devices or in one case we were sued on accelerometers for safety systems. The plaintiff's view is that we very actively market safety systems and it is a bigger factor in the sales of an automobile than just some small percentage of the piece price for that little accelerometer component. It's a struggle.

>>SUZANNE MICHELLE

Carl.

>>CARL HORTON

I'd say on the valuation question, because it is so tricky, you could put ten patent attorneys in a room and you could get valuation differentials that would be several orders of magnitude different and it's partly because they are context specific. The value of a patent is context specific. It may be worth X. in one environment and transaction and maybe worth ten X. or 100 X. in a slightly different one. An example is we had a situation with a third-party that happened to be a business partner of ours. We happened to hold IP that was instrumental in their space because we chose in the end not to do that. It was not core to our business. They were building a business model on it and were new to the space and we allowed them to

do it and we offered them a license under Ford patents for a particular value. They came back with something of one order of magnitude less because they could not justify and we try to explain why we thought it was worthwhile and some of the explanation was you have a competitor in this space that has better IP than you. It's likely they will sue you. But we couldn't reach agreement. Six months later they were sued by their competitor in the way we had anticipated. They came back and were willing to pay the asking price without any discussion for only half the patents we put on the table initially. Just because the context had changed and there was more certainty and now the value was clear that we were pretty much on point. That differential is always going to exist that you could see the value of the patent quite significantly different.

Where we in license the most technology we have the greatest experience. In the healthcare space we have determined our royalty base under almost every different model you can imagine. And it really comes down to how is it easiest to do the accounting. Is it easiest on some feature function of the software or on how many times we shipped a product with that feature in it? The royalty percentage is drastically different, but the total package price is about the same. But we do what is most economically feasible, easiest to audit and track and account.

>>SUZANNE MICHELLE

Do you determine that base first and then figure the royalty off of that?

>>MALE SPEAKER

We typically decide what the value is and/or if we disagree which is typically the case in the value, we will talk about a royalty based on some structure that we can agree on. Whatever is easiest to account for, we will base it off of that. And then we will take one-step further and say usually they believe there is more valuable because they think it will drive our sales by a 50 percent increase. We think we will see a 5 percent increase. We will build into the royalty structure, well if it's a 5 percent increase as we think the royalty rate is X. If it is 50 percent like you think then it's a sliding scale or a different royalty so we can account for difference in what we think the actual value is and then we let the market decide. The market will tell us what it is worth. We'll have to play some value on our ability to try and maximize whatever it is we're trying to take to market. But otherwise it is the market that makes the final decision.

>>SUZANNE MICHELLE

Gary.

>>GARY GRISWOLD

One of the things that gets lost sometimes in these discussions about damages or licensing is at the end of the day we are looking at the impact on a P&L typically of an operating business unit. If you are looking for a forward reaching you are taking an exclusive license and will add this product to your product line, a heavy driver on that evaluation certainly is what is the value in the marketplace. That's what you're looking at. But at the end of the day, that converts into a number and a cost in your P&L and that has to fit into your whole business model and how you operate. That is an important thing particularly as you are thinking about bringing in technology that you are going to take a license under and then you use that advantage in your products. I think sometimes we use that perspective when we are talking about as patent attorneys as opposed to business people.

>>SUZANNE MICHELLE

Can others talk about your experiences in licensing technology and deciding what is a good price for the patent? Thinking about what the base ought to be and the rate ought to be. I would like to understand some real world experiences in doing this. If you agree with Carl, that is great too. Or if you can tell us more about your own experiences.

>>MALE SPEAKER

From our experience, one of the things we have to look at is what is the consumer going to pay at the end of the day. They will not pay \$50 per bottle for Tide. So someone -- someone may, but usually not. So let's say we get a ten X cleaning advantage by that invention being put into our product, then we may be willing to pay a bit more because the consumer will see the benefits. It comes down to what is the economic value of the benefit that we will see at the end of the day and what is the consumer willing to pay for it at the end of the day. That comes down to a number. Then I can price it based on the total package that I sell of Tide or I can value it based on that little piece of it that went into the product. If it is 1 percent of \$100 or 10 percent of 1 dollar it is still 1 dollar. No matter what increment I pay on it. The royalty and the base are fairly flexible. At the end of the day what you want to look at is what is the value that you are getting and what is the consumer ultimately wanting to pay to get that feature.

>>SUZANNE MICHELLE

Do you agree with Carl than that the base is determined by the convenience of the accounting?

>>MALE SPEAKER

Normally. Because it is much easier. In our case we base it on cases in what we call it on our business. A case may be let's say 144 diapers.

Rather than do a per diaper, my accounting people can do it much better on a case basis. You may set the royalty on that. You may set the royalty on some other base. I don't think there is good understanding out there right now or on the Hill that the base and the royalty rate are the flexible numbers. It is what is the economic value that the invention brings.

>>MALE SPEAKER

Absolutely.

>>SUZANNE MICHELLE

Everyone is agreeing. Richard is nodding. Jennifer is nodding. Okay.

Thank you. That is very helpful. Have any of you had experiences or have to dealt with what we talked about in the IP panel, the secondary market for patents? Patents that are being bought and sold and licensed to companies that have independently invented what ever is covered by the patent and incorporated it into a product and then a patent holding company or a troll comes and says you need to pay or that is one way that

market works. Or another might be that a patent broker comes and says here's a patent you might be interested in buying, it's on the street. Do you want it? Is that anything that affect your companies or industries?

>>MALE SPEAKER

I will start on that. I think -- I don't like the term troll so I will use nonpracticing entity.

>>SUZANNE MICHELLE

I would like to distinguish though between a patent holding company that is not transferring technology. This is about rights, clearance and not technology transfer because you are already using the technology.

>>MALE SPEAKER

Okay, but we have had that problem since the beginning of time. We have had people that have always said look I have a patent that covers this and you owe me a lot of money. This is not a new problem to any of us. It is problems that we have dealt with for years but the difference is that we tend to invest early on in the process and will try to know all of those patents before we even go to market and we will either clear them before the product hits the marketplace or we will have designed around it so

there is typically not that problem or we will know that the patent is invalid. Most of our companies have the policy that we will not infringe another's valid patent. We are willing to invest upfront to make sure that that does not happen. There are some that may get through that we don't know about or they are straining the reading of what their patent could potentially cover, but we have dealt with that forever. What we have done is usually we have gone to court and we have litigated those issues because we either know the patent is invalid or we are not infringing. Maybe the rest of the panelists can speak to that, but I don't see that as a major new revelation to our industry.

>>SUZANNE MICHELLE

You said you have seen it forever. Has the frequency at which you have seen it increased at all in the past ten years? Five years?

>>MALE SPEAKER

At least from my perspective I have not seen an increase. I don't know about anybody else.

>>FEMALE SPEAKER

Significantly for Ford. At any one time we used to have two lawsuits and

now it's a dozen or more of nonpracticing entities.

>>SUZANNE MICHELLE

Is the increase almost solely attributed to nonpracticing entities or is there

--

>>FEMALE SPEAKER

Yes.

>>MALE SPEAKER

Do you think that is common throughout the automotive industry or is that particular to Ford? Does it focus on one type of technology, say technology that involves electronics versus other type of technologies?

>>FEMALE SPEAKER

No, it is various kinds and it is in addition to technology it is systems -- IT systems, websites. We had a lawsuit involving audio and video streaming. Things that are very non-core to our business.

>>MALE SPEAKER

Is that also true, to the extent that you know, for other car manufacturers

like GM and others?

>>FEMALE SPEAKER

Yes. Most of the time they are in the same lawsuit we are. With respect to the other automotive companies, we have managed to get along. It is rare that one vehicle manufacturer sues another. We have found a way to license. It's not always perfect or easy. There are always issues on values and that kind of thing but pretty much in the automotive OEM industry there are not many lawsuits between companies.

>>SUZANNE MICHELLE

Carl.

>>CARL HORTON

I'd say if I take a long look over a ten year horizon the frequency has gone up over ten years, but what we have seen more of than the change of the frequency is the parties doing what used to be a lot of contingency fee cases eight years ago may have more traditional troll looking patent holding entities today. But the fact of the matter for us is we are a big company. We have always been a big company so we always are a big target. That is the way it has played out. We have not seen a dramatic

rise in the frequency but the composition of some of those cases has changed.

>>SUZANNE MICHELLE

Okay, have you -- how has GE responded or any of your companies responded, if at all, to that increase?

>>MALE SPEAKER

Again we have run the economics. We have lost some big cases so we are not immune from the problem for sure. About ten years ago when we had a big case, the Phone Are (ph) litigation, it cost us over \$100 million, we went back and structurally looked at the whole of the system and the issue and we broke it down and what we do today that is the biggest difference is our clearance processes are three times better than they were ten years ago. We weren't good enough, we weren't tracking them early enough, and investing enough on the front end. And so we redesigned our systems and redeployed assets to get that front end right. We look at a lot more patents and look at them more carefully and oppose more patents and watch them from cradle to grave.

>>SUZANNE MICHELLE

You oppose patents. How do you do that?

>>MALE SPEAKER

Well in Europe we keep a good eye. We will watch them in the states and get our opinions and do our due diligence. The best avenue for us is to design around. It is almost always the cheapest. We can't live with the uncertainty. We will either design around it, first option. If the price point is too much we will license it in. Usually there is a parallel structure going on for both of those. Until we know the price, we don't know which is cheaper. If the prices right, we will license it in and take that path. If we don't then we will design around. If we can't see a good design around that we have no choice, but to license it. We will put structures in place if there is any degree of uncertainty around the patent we will even agree to license it subject to some future resolution whether it be a mediation around the scope of the claims or an arbitration from some third-party arbitrator to say we think it is the scope they believe or the scope we believe. The value may change on the outcome of that. If it is a pending application, it is the outcome of the opposition in Europe, what will that determine. There are a lot of ways to get at that uncertainty that is inherent in that dynamic. We have found it so much better to deal with it on the front end not the backend.

>>SUZANNE MICHELLE

Okay, and the design around cost is that something of a cap on what you are willing to pay?

>>MALE SPEAKER

Absolutely. You get back to the economic value question. What is it worth? If I can design around for a penny less, I will design around. It is that simple.

>>SUZANNE MICHELLE

Okay. Gary.

>>CARL HORTON

The addition I would make on that is there are times when you have to try cases. And a good program in addition to all the things they talked about in terms of good clearances and everything else, is you have a case that is just inappropriate against you. You have to be willing to try it just like you are on the offense. If you are not willing to try cases, you tend to have an outcome you don't like. You have to be willing to do that. Most companies sitting here are willing to try cases.

>>SUZANNE MICHELLE

Given the high cost of patent litigation, how does that affect the decision at what point to try a case? If you can pay to get rid of the problem for less than the cost of the trial, do you ever go to trial anyway?

>>MALE SPEAKER

Sometimes you would because there is a history you are developing. It is the next case and the next case. You have to work off of some principles.

>>MALE SPEAKER

Occasionally a deep pocket can work in your favor. (laughter) you do want to establish a certain precedent that we won't be shaken down by a really weak patent or somebody who thinks they can hustle up a quick settlement out of us.

>>MALE SPEAKER

Going back to your first question though on this there has historically been people that have developed patents that they don't put to use or that they don't transfer technology and there is an infringement question. These patent in the secondary market have provided an opportunity for people to

get value independent inventors and what not, to get value from their work. There is another piece to this. And there is a struggle -- all the companies sitting around here have been around for 100-150 years or something. We were talking about that earlier today. We are long in the tooth. Anyway, over time people have come to us and asked us to take licenses for one reason or another. This provides a basis to do that if it's handled in an appropriate manner and it can be an effective way to handle rights like this.

>>MALE SPEAKER

I will add two things because I think it is on point where we want to go. Most of us feel that an opposition system where we could oppose patents early in the patent office would help get rid of some of that problem and then if we could strengthen the examiners ability to have the time and the tools to do a better examination job that we will not see some of these poor patents that are coming out of the patent office. If there are ways that we can -- this is one of my big issues, fully fund the patent office and keep their money so that we get a good examination and then we have quick opposition procedure in the first 12 months, a lot of these problems will be solved.

>>MALE SPEAKER

I would add one point to that. The patent system to operate in its best manner to incent innovation is valid patents issued promptly and cost efficiently. You do those three things and you will wind up to incent innovation because the rights are clarified early, the inventors have rights to transfer. It is cost efficiently so that the cost of doing the process is effective and they're valid patent that's another key piece. You have those three things, that goes back to the operation Stephen was talking about in the patent office. If you have that you deal with many, many of the problems people are talking about today.

>>SUZANNE MICHELLE

Carl, do you want to add to that?

>>CARL HORTON

The only thing I would add to that is 18-month publication. I think it would be worthwhile to know because occasionally there are some things we don't see. We tend to pick it up later than we would like. That always causes trouble especially where our cycle times are more compressed. For the longer cycle businesses, like aircraft engines and turbines, trust me, we have seen plenty by the time the product hits the street but some of these others you have to see them promptly. If they can be kept secret

than that makes the job a little more difficult. Having that capability would be very helpful.

>>MALE SPEAKER

It has been said in other forums that companies at some level will not look at competitors patents because they were concerned with willfulness and that law has changed a bit I take it you have been doing this for a long time and this was not a concern of companies such as yours.

>>MALE SPEAKER

No.

>>MALE SPEAKER

No. (overlapping speakers).

>>MALE SPEAKER

That's almost an offensive comment to me. Look at, the patent system is about in incenting innovation. Look at the technology that has been developed. To be concerned that you have an infringer problem, you are not willing to look at what other people are doing and the patents out there -- I don't know how you can defend that. I come from a history of

clearance. We always clear. We look when we are coming out with a new product so we always look at the patents. That is also how you get ideas to figure your next innovation. That's how it's supposed to work. To not look at other people's patents, never made any sense to me.

>>MALE SPEAKER

You were aware of the comment.

>>MALE SPEAKER

Absolutely. I had smoke coming out of my ears on the comment plenty of times.

>>SUZANNE MICHELLE

Richard did you want to say something?

>>RICHARD PHILLIPS

I can't resist the temptation to say what has already been said. But it can't be said too often. Anything that improves the predictability, the efficiency, and the speed of the patent system will incent American corporations to spend more money on research and development and ultimately that is where we want to go. The patents are a tool. What you want is research

and development for better healthcare products, better turbine engines, better adhesives and sandpaper, better gasoline and petrochemicals, and better and safer automobiles.

>>MALE SPEAKER

How about Tide?

>>MALE SPEAKER

Absolutely.

>>MALE SPEAKER

If you don't read your competitors patents, you are not up on the latest and greatest technological advances which I can't believe a competitor does not want to know what their other folks are doing. Plus it incentivizes you then to make the next breakthrough beyond that and to worry about willfulness by looking at them I actually avoid willfulness because I have an opinion. I know whether the patent is valid and then I either design around it or I try to license it in so why would I ever be held to be willful when I know about the patent and I have dealt with it. The whole statement to me at least does not ring true. It is burying in your head in the sand to try and make a problem go away.

>>MALE SPEAKER

I will add one caveat to that. Pre-Seagate, I had some concerns over willfulness, not because we weren't being meticulous in looking at the patents, but because we were such a big organization that my fear was that the patent that was handled by one law firm in city one and a patent that was being handled by another law firm in city Y that were on similar technologies and there was no communication but because they both said GE at the top, there is some expectation that I knew everything going on in those patents. It's ludicrous. Now inequitable conduct does still cause me heartburn. We had to look at these issues. The more rigorous we try to be on the clearance side, obviously that's the pushback we get every time we have our processes and tools scrubbed by the litigators, they come back and say you are creating the potential for this risk on the other side. On balance, there is no doubt that the right thing to do, at least we made the call, the right thing to do is be more rigorous on the clearance.

>>SUZANNE MICHELLE

Going back to the 18-month publication. You said that helps, but you don't yet know the claims, when you see that published patent application.

What is your ability to try and predict what will come out of that application

and how it might affect your products and your need for clearance?

>>MALE SPEAKER

It's decent. There is always some degree of uncertainty, but they do have parameters from the prior art. We can guess those just as well as the company who filed the patent application. The drafter had to go through that same exercise. We put our teams to work doing the same thing. If we can design around that is clear enough and far enough away from what would be an acceptable parameter, then we go forward. Otherwise, you watch it, you oppose it where you think it has gone too far or you made license it in under some conditions based on what might take place down the road.

>>SUZANNE MICHELLE

Okay. Richard you were nodding. But you are being your own examiner in that case. You are not getting any predictability out of the patent office. (overlapping speakers). That patent has to sit on top of your desk for a while (overlapping speakers).

>>MALE SPEAKER

But with private pair and with other tools that we have

we now know exactly where that is in the patent office, what stage and we can follow it much easier because it is an open process. We kind of know how things are happening where everything else used to happen in secret and we would have no clue.

>>SUZANNE MICHELLE

Jennifer I would think in an industry that is combining components from different suppliers that are not part of your core technology that is a lot tougher to keep an eye on pending applications that don't pertain to your core technology and really pertain to the technology of a competitor.

>>FEMALE SPEAKER

We don't so much. We rely on our suppliers to do that and to sell us products that free from infringement.

>>SUZANNE MICHELLE

Richard you were nodding. Do you follow the applications --?

>>RICHARD PHILLIPS

I'm very much in accord with the value of the 18-month publication. Almost

all of the attorneys that work in my group do keep track of their areas of responsibility and the extent of patents publishes in the United States or Europe. We do identify and track it and it is our job to predict what is the likely coverage. Sometimes our prediction is this could be a problem for program we have in place. We either reevaluate the program -- sometimes we take a license to a pending patent just to eliminate the risk. Oftentimes we can say there's no way they can get a patent from this spec that will simultaneously be valid and cover what we are doing. It is not a fun job to do, but it is the very important part of our job. Eighteen-month publication is truly critical to that. I do worry about those cases in the US only where I don't get that opportunity and what may be pending out there for 3-5-7 years. Those represents a real threat to expensive R&D. Each year, I have to go on a team to justify how much R&D money we are spending. To the extent I can make the case that R&D is bringing a return on Exxon's investment, I will get money. To the extent there is uncertainty or unpredictability, risk, they will spend less money.

>>MALE SPEAKER

Suzanne, one other point on this is an is that many companies require that their R&D people follow the art very carefully because they don't want them reinventing things. There was a study done, I haven't looked at this

for a while, but there was a study done in Europe, for example, that at least 40 percent of the R&D that was done over there was a repeat of what somebody else had already done. Think about that. I don't know what the number is now. You don't want to have that going on in your lap and one of the ways people learn about these things is the direction that Steve was talking about is to look at the patent art. That is a key area. For the technology people.

>>MALE SPEAKER

In entering into licensing deals and because arrangements with other companies, those terms are usually confidential. You settle a litigation it is also confidential. You all do a lot of licensing deals and have a lot of knowledge that you work with, but we hear from smaller companies and from entrepreneurs that for them it is a first time and they don't have any idea what their technology would be worth. You deal, for example with small entrepreneurs, I suppose all of you do, how do you deal with that concern that small companies have where you have the big company licensing to the soul inventor, the entrepreneur or the University?

>>MALE SPEAKER

Two things you worry about. One is your reputation because the first time

you take advantage of an individual or a small inventor or university, word will get around very quickly that they will not want to deal with you again because you will take advantage of them. So we try to have a win-win because when we create a partnership with a small individual, that leads to another individual wanting to come to us that leads to another group. It is all these networks of collaborative things. You treat people right and they want to come. As far as not knowing what the terms are, I think it would be devastating to the industry to have to publish what our licensing terms are. There are many times where I know my company is looking at a brand new product line or product area and then to have to publicly state that we are interested in a technology for this amount of money not only gives our competitors a competitive advantage that they should not have, but it really hurts I think the process because people may not be as open in their discussions. I think generally people know again what the economic value of things that they are going to get from their inventions. If you don't, you structure the deal as Carl said to take care of that so that if it is a huge success then that person is rewarded for that being a huge success. If it is not, they don't get as much. I think that's what happens.

>>MALE SPEAKER

I would just add. I cannot think nor am I aware of any of our colleagues

who have ever confronted a situation where the other side had undervalued an invention. They usually comes in for asking for ten X. or 100 X. of what we think the street value is of whatever it is they have. That is not much of an issue. I do think that that is 80 percent plus of the negotiation. The dollars and cents. The other terms you can usually work your way around. The question I don't know if you were angling at, is there enough of a marketplace around the terms of these licenses to know what should be done. Our experience has been that if someone is coming after us and they want us to take a license and they have other licensees, they are vocal about it. And very quick to tell us you should sign up because we have this other list of licensees that have already done it. Get in line and do what they have done. They are pretty forthcoming. And a sophisticated negotiation almost always has a most favored nations clause that brings everyone down to roughly the same place. Whether I see those terms or not I know that a third-party can intervene and take a look. We have some degree of comfort that we are paying what everybody else is paying.

>>SUZANNE MICHELLE

Okay.

>>FEMALE SPEAKER

Being greedy is a double-edged sword because that can come back to bite you in litigation if you are sued commanding a high royalty on something when you get sued on the same product.

>>SUZANNE MICHELLE

Okay. Very good. The recent changes in the patent system through the court cases such as KSR, MedImmune and Seagate have been discussed somewhat as weakening patents. Is that your view of those cases or any one of those cases, how have they impacted your ability to use patents to both incentivize technology and transfer technology and all of that?

>>MALE SPEAKER

Let me make a quick comment on MedImmune. It is important that people when they are negotiating licenses be able to do that in some comfort zone. So people had to work out arrangements, they did before, and they have to now so that we don't have people suing each other as the discussions go forward. That has put more pressure on that dynamic. I think that is just one example. Your overall comment have these cases weakened the patent system or taken away some of the value? They

have. They all have chipped at it one way or another and moved the balance away from the patent owner to the infringer unfortunately.

>>SUZANNE MICHELLE

Carl.

>>CARL HORTON

We have had discussions with numerous parties even as we traveled around the world and met with parties from other companies and we have met almost no one who thinks these are any thing, but shifting the power of balance away from patent holders in favor of non-patent holders or would be licensees to a person both raising the level of patentability or making it easier to challenge the patents or making it harder to get willfulness for those that hold patents. All of that is a sign of the pendulum swinging back away from the patent holder.

>>SUZANNE MICHELLE

You all talked about the importance of quality in the patent system, can you view KSR as a positive thing because in that it improves quality?

>>MALE SPEAKER

On balance we think we do real technology. That's why we invest \$7 billion per year to do real technology and solve real problems. We are not afraid of a higher patentability standard. A lot of the lawsuits with the ankle biters, we call them. People coming after us, with random would be patents, we think those are questionable. We think it works in our favor.

>>SUZANNE MICHELLE

Steve you nodded.

>>STEVEN MILLER

I think it has been good from that standpoint that we will see less of these marginal patents that contribute nothing to these technological arts. The other side of the coin is the patent office has taken it way too far now and we need to look at how the examiners are applying the case because I think they have swung the pendulum here all the way to the other side and one of the reasons their allowance rate is so low is that they have over applied the case. Almost any mechanical case that you see these days says that it's a simple invention where you put two things together. I think we have to get the patent office back to where it should be and then KSR will be a good thing for all the parties.

>>SUZANNE MICHELLE

Any thoughts about the cases, KSR or any of the others?

>>MALE SPEAKER

I am generally in accord. I think most of these are more incremental revolutionary than radical. They have not had a profound impact on our practice. All significant, you have to pay attention to them, but they are profound problems.

>>SUZANNE MICHELLE

Great. Thank you. We are just about out of time. Would any of the panelists have any last points you would like to make and then we will wrap up? Hearing none I will thank you very kindly. This has been an interesting and helpful discussion for us. Thank you for participating. We will be back in 15 minutes to talk about the life sciences industries.