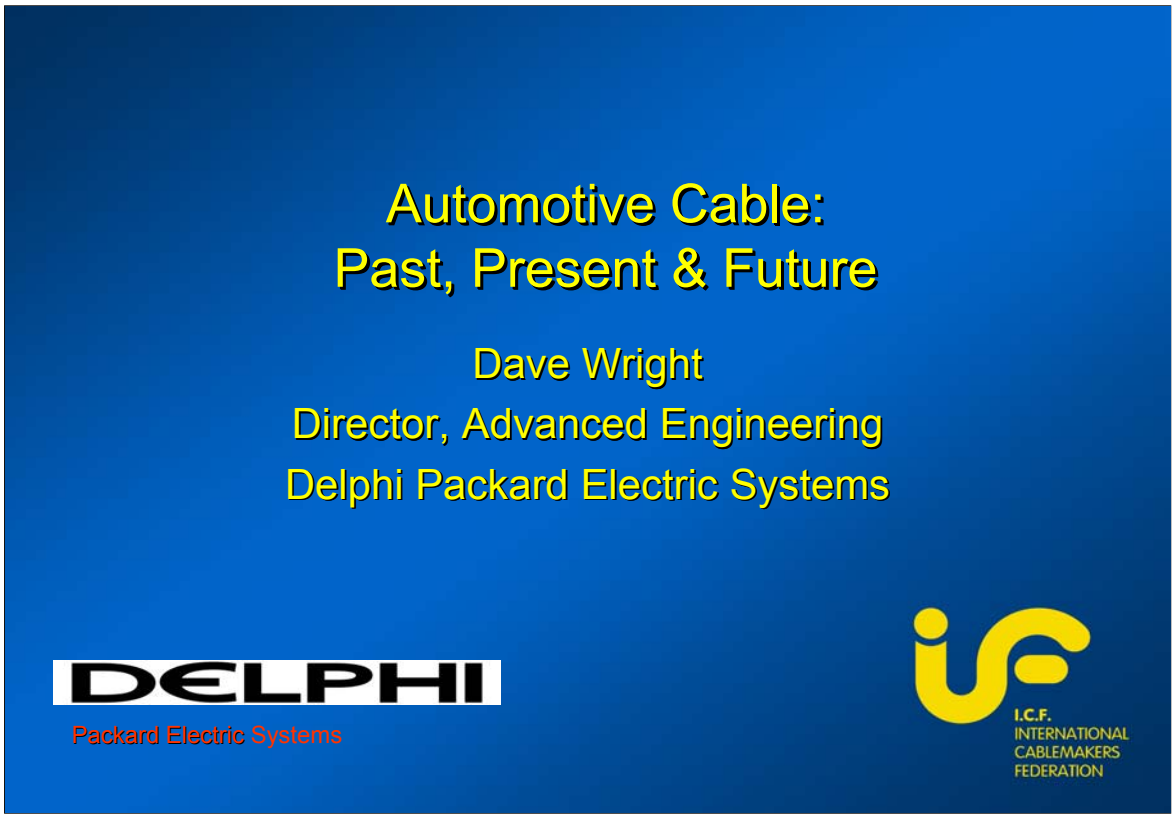


Good morning.

First I like to thank ICF for the opportunity to share Delphi's perspective on our business and how it interacts with your business. In many ways we are part of your business, because we are also a cable manufacturer. On a personal note, as an engineer, it has really been interesting for me so far to be here at a conference with businessmen. It reminds me of a story of an artist, a CEO and an engineer. They were asked if it were better to have a mistress or a wife. The artist said: You must have a mistress. That is much more romantic. The CEO said: You must have a wife, because stability is important. They help you run the home when the men run the business. The engineer said: You want to have both, because each one will think you are with the other and that lets you spend more time in the laboratory. So, I got out of the laboratory this week to be here and I appreciate that.

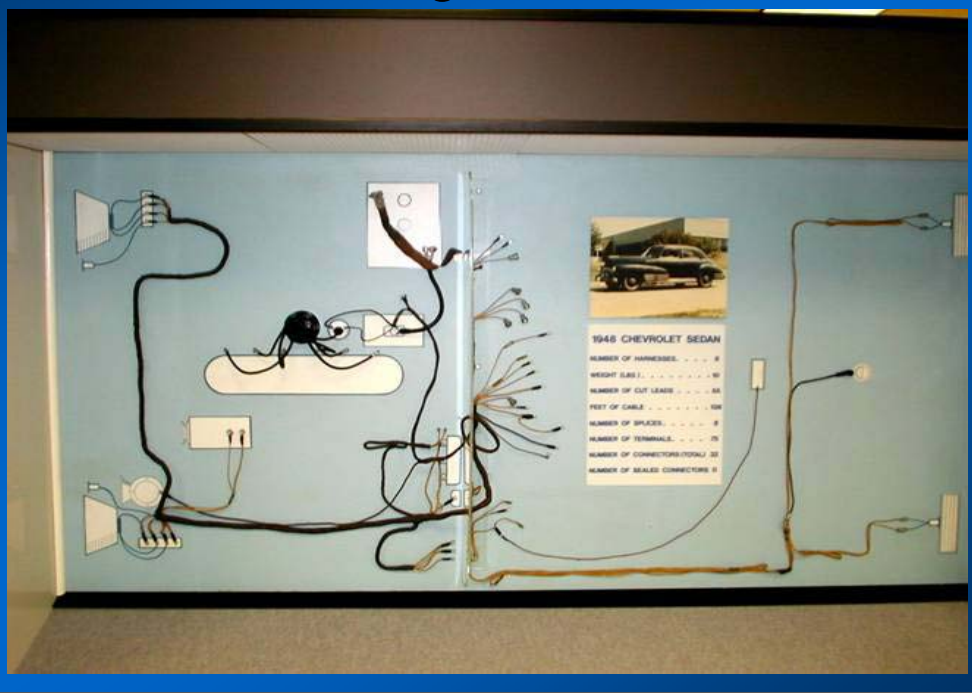
What I like to do today is put our business a little bit in perspective, take a look at the past, tell you where we are today and then project into the future. I structured this as a scrapbook, a crystal ball, an engineer's notebook and maybe a highlight film at the end.

The 1948 Chevrolet

Let us start off with the scrapbook. My wife keeps scrapbooks. She kept one for my son during his last year of high school. He put all kinds of mementos and photos in there.

I want to go back to a little bit of information from the Delphi Packard scrapbook. This is the 1948 Chevrolet Sedan. I would like to say, this is my vehicle, but it is not. A beautiful representation of the auto industry over 50 years ago. Everybody would love to have this car. What I do have down the hall from my office is a wiring harness from this vehicle. It is on display on a board.

1948 Chevrolet Wiring Harness



You can see here, that it does not look very complex. It is relatively easy to understand the functionality of such a simple product.

Key Harness Metrics: 1948 Chevrolet

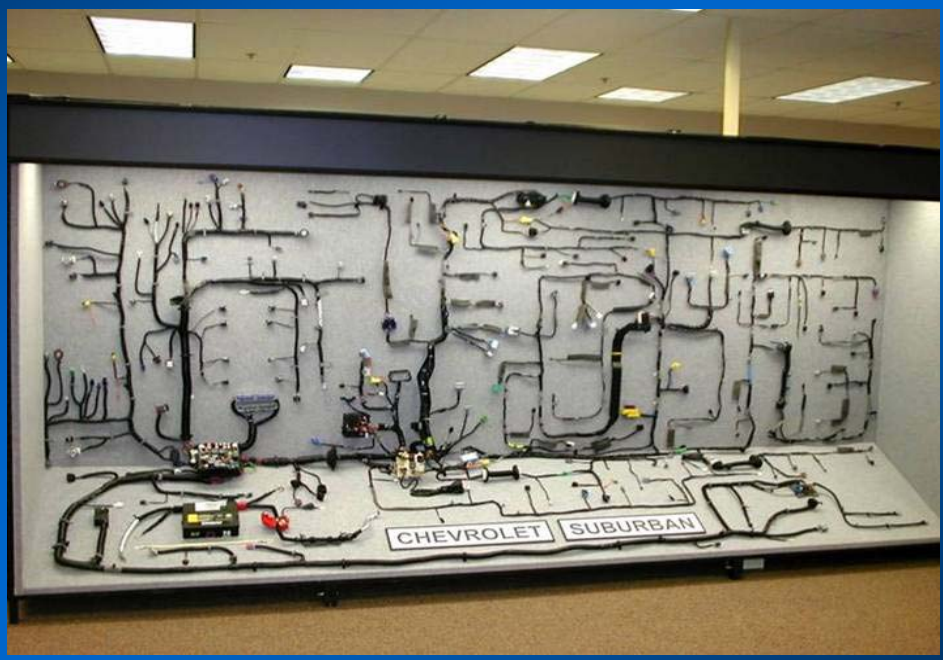
• Number of harnesses	6
• Mass (kilograms)	4.5
• Number of leads	55
• Total length of cable (meters)	42
• Number of splices	8
• Number of terminals	75
• Total number of connectors	32
• Number of sealed connectors	0

Look at the metrics of this car. That was the state of the art in automotive harnesses in 1948.

2003 Chevrolet Suburban

Then take a look at a recent vehicle, a 2003 Chevrolet Suburban. This is not a top of the line vehicle in North America. It is certainly more than an entry level vehicle.

2003 Chevrolet Suburban Wiring Harness

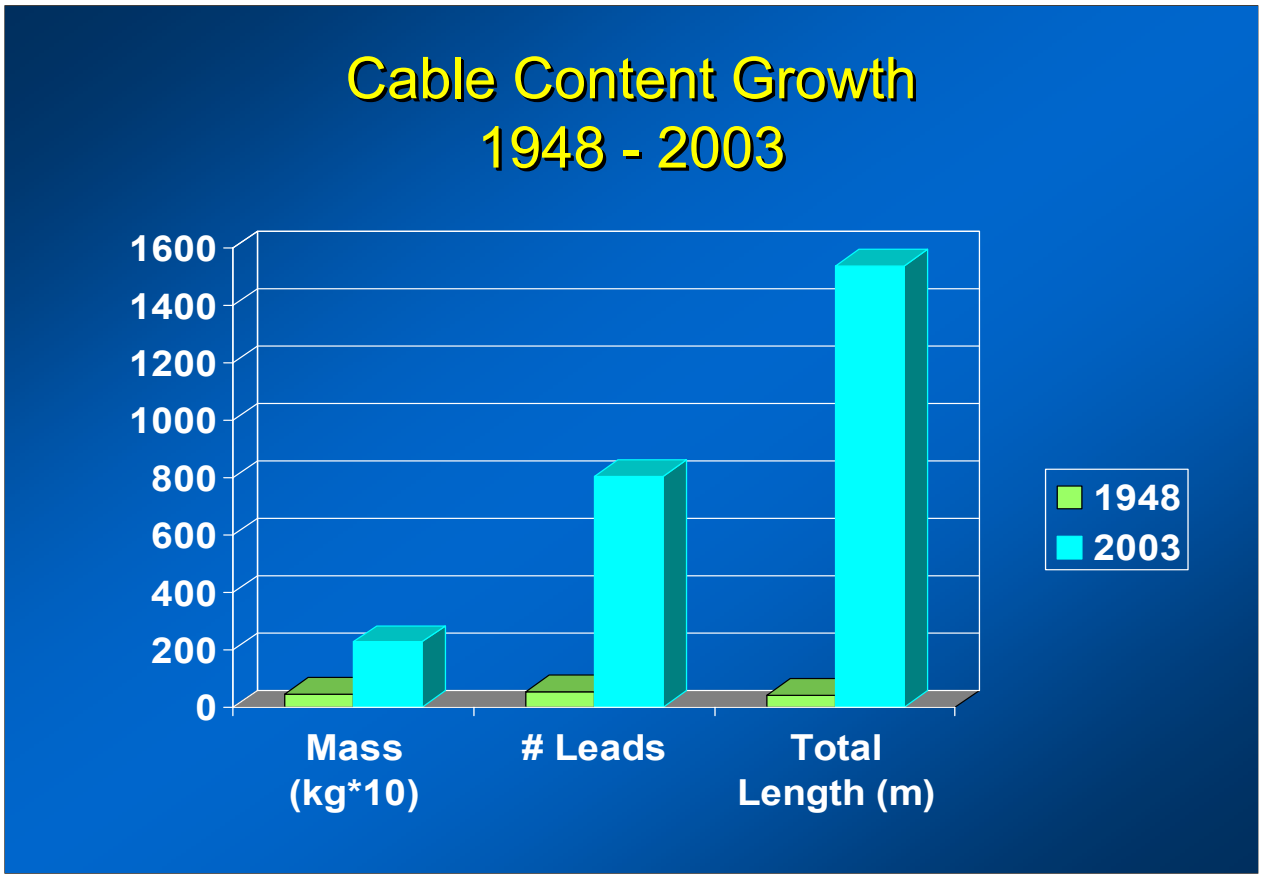


This is what the harness of the 2003 Chevrolet Suburban looks like. You can see that the number of components and the complexity has grown dramatically.

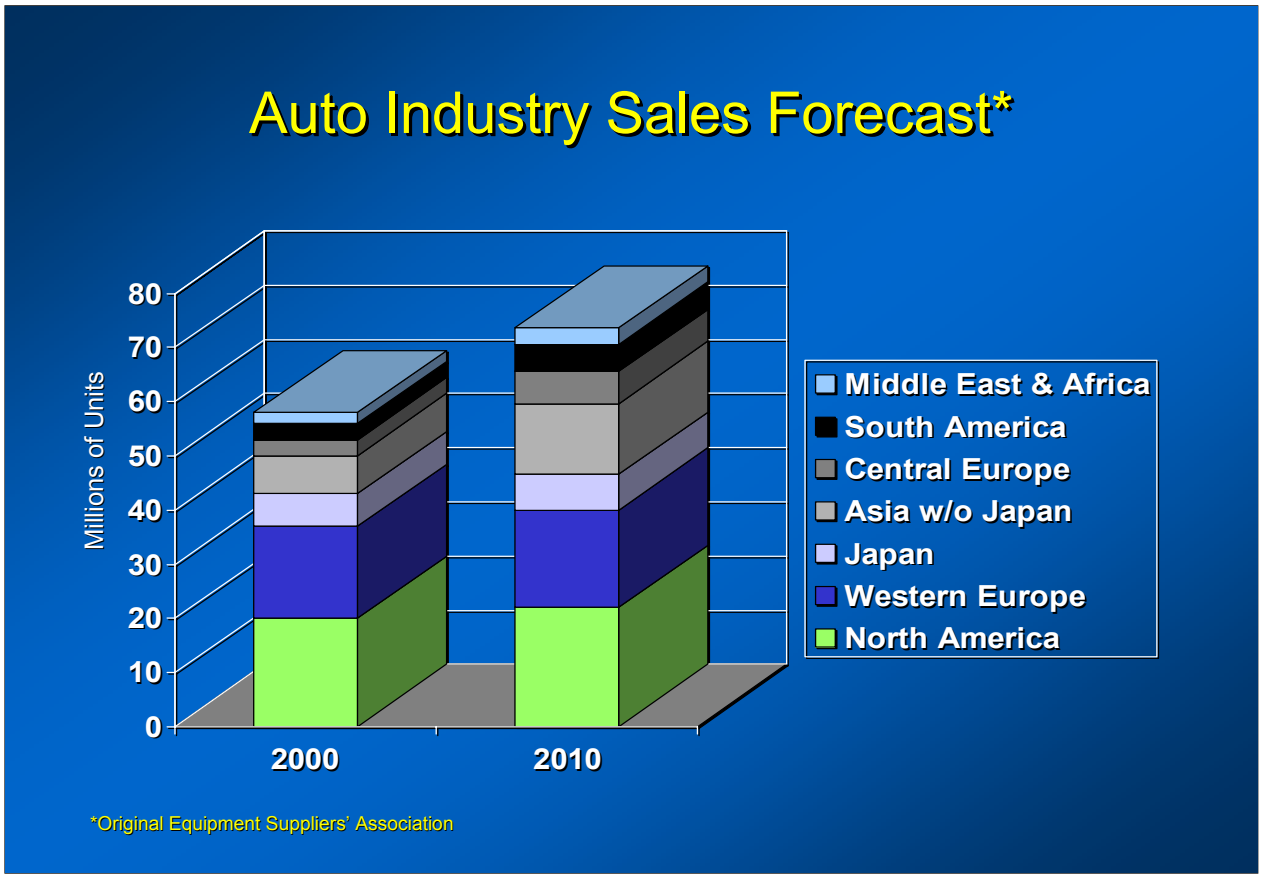
Key Harness Metrics: 2003 Suburban

• Number of harnesses	20
• Mass (kilograms)	22.7
• Number of leads	804
• Total length of cable (meters)	1537
• Number of splices	19
• Number of terminals	1407
• Total number of connectors	226
• Number of sealed connectors	100

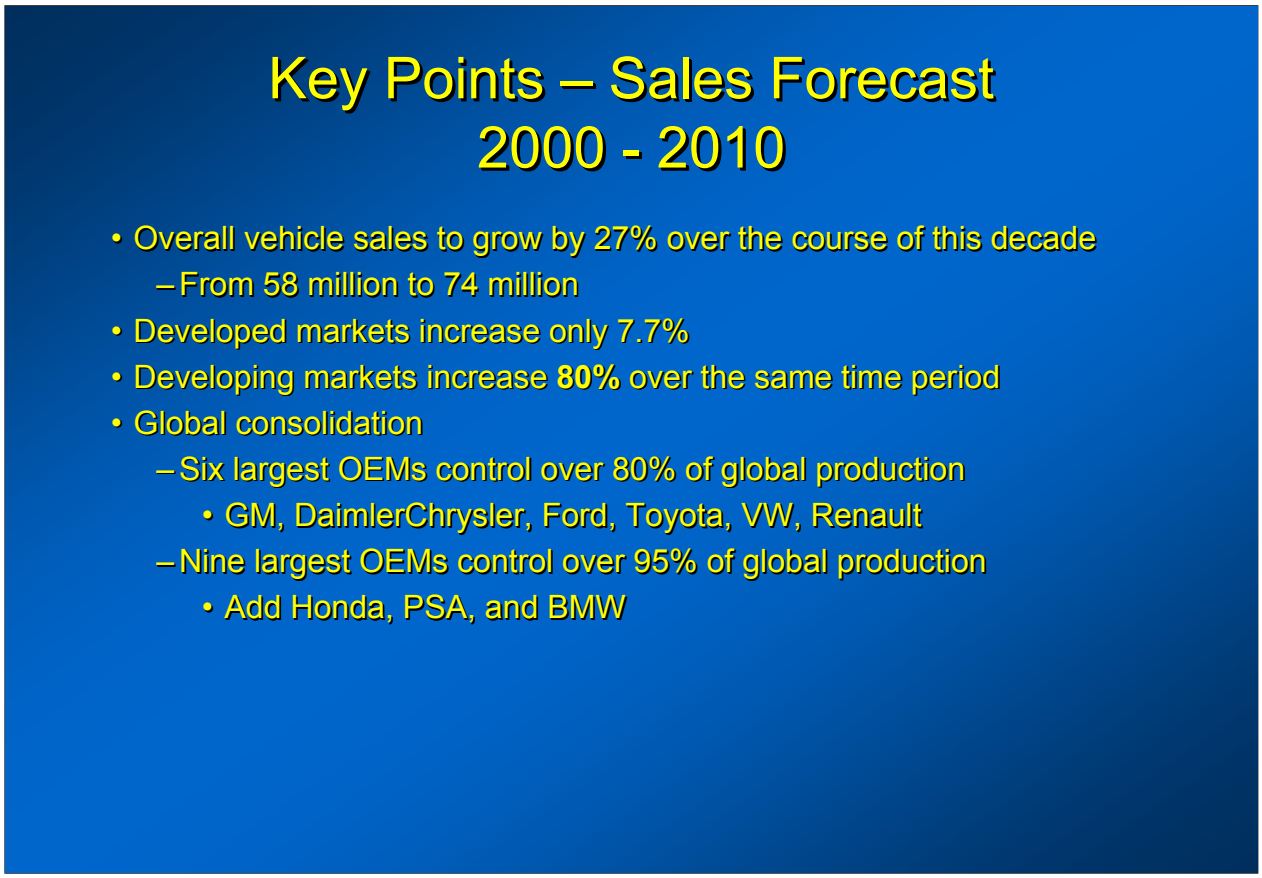
What we have in terms of metrics for the harness with the 2003 Suburban is shown here.



So no matter which way you look at it, there has been an enormous content growth in automotive wiring harnesses over that period. Whether you look at the mass, the number of leads or the total length, you can see, that the growth has been frankly outstanding.



Now I like to look at the crystal ball. It is the thing that you look into and some people can see the future. I would say, one thing we have to remember about forecasts is that they are always wrong. This is a comparison of the automotive market globally in 2000 and how that is going to change by 2010. It is divided by those 7 regions of the world.



Globally we can see relatively significant growth in the automobile industry, 27% over the course of that time from 58 million vehicles in 2000 to a projected 74 million vehicles in 2010. However, if you look at the major established markets in the world today, North America, Western Europe and Japan, those markets are projected to increase only 7.7%. It is the developing markets that are going to increase by over 80% in the same time period. This is no mystery to any of you, but it does have some very significant consequences in our business. One is consolidation. It is projected in that timeframe, that the 6 largest automakers will control over 80% of global production. If you add 3 more, you can account for 95% of all automotive production, concentrated in the hands of 9 companies.

What would your business be like, if it were concentrated in the hands of 9 companies rather than 100? It has some implications about how business is being done. Cost pressure is going to continue to be a very significant fact of life in the developed markets not only for OEM's but for their suppliers. Those of you, who are familiar with the North American market today, know that incentives are in the $3000 to $5000 per vehicle range. It has put the North American car industry under significant profit pressure. That same cost pressure flows right down to the suppliers and makes cost reduction an absolute necessity for survival.

Another factor is that a global footprint is necessary to be competitive. Very few car companies want to deal with simply a regional supplier. They want someone who could service them all around the globe. They expect equal performance and equal pricing regardless of where that location is.

It is likely this will drive continued consolidation in the automotive supply base and in the same time our customers are asking us for more service. They ask us to go into their engineering offices and take care of the design function, take care of the CAD (computer aided design) function, and then recover that cost in the price of the product.

Automaker Cable Priorities

- Reduce cost
- Reduce mass
- Improve packaging
- Improve quality & reliability

- These priorities allow other technologies to displace conventional cable, which is transparent to their customers

What do we see as our customer's needs and some of the technology trends? Let us take a peek at the engineer's notebook.

Our customers' priorities are first to reduce cost, reduce mass, improve packaging and improve quality and reliability. One thing which is important for this group to realize is, that cabling is not something that a person who buys a car notices or cares about. They buy function, they don't buy cable. This allows in certain situations where a function can be displaced by another technology to be replaced relatively transparently. So you do not only have to compete with each other, you have to compete with some other emerging technologies as well.

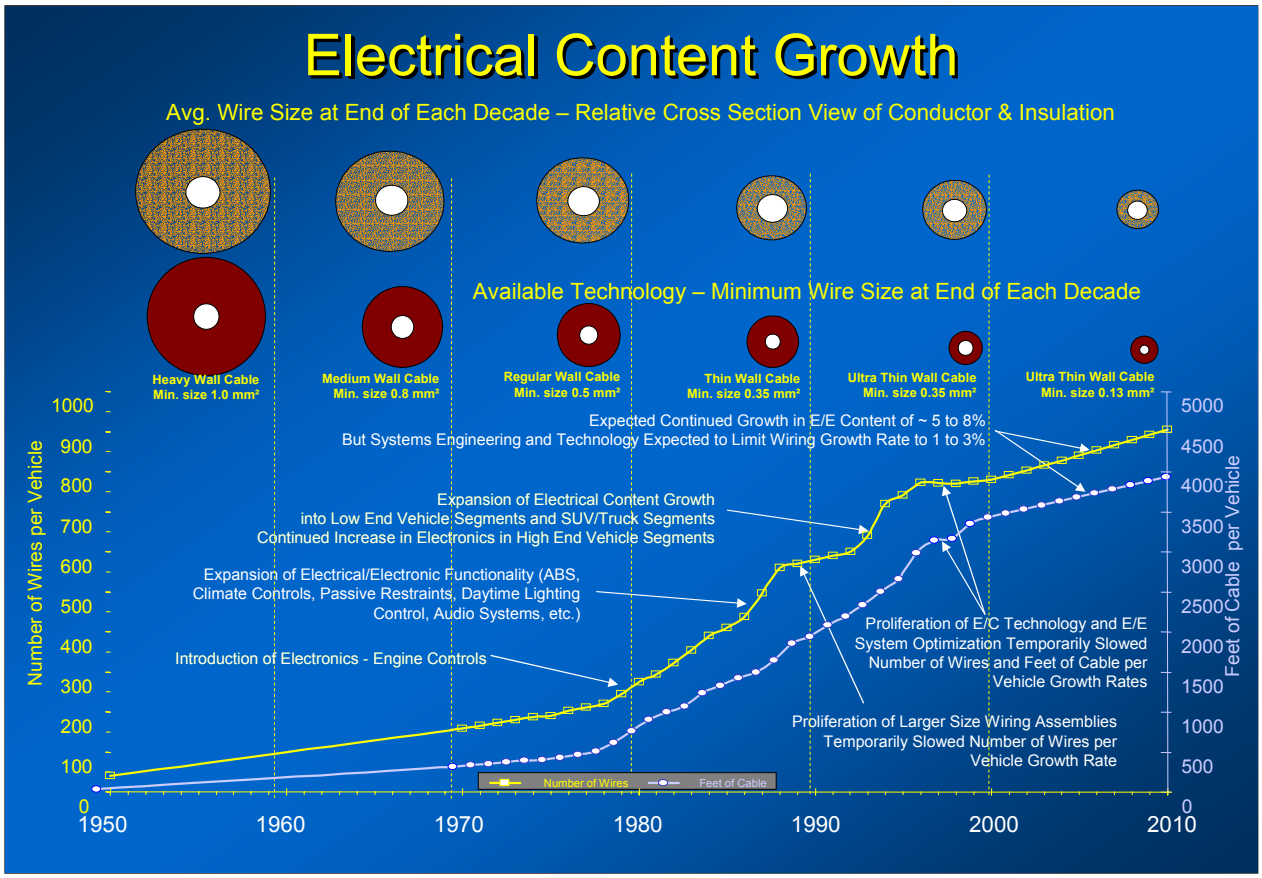
Current Trends in Automotive Cable

- Continued electrical/electronic content growth
  - Mobile multi-media
  - X-by-wire
  - Safety systems
  - Convenience features
- Thinner insulation
- More small diameter cable
- Quality improvement
- Multiplexing and electrical centers slow cable growth
- More large diameter cable
- Green
- High-frequency capability (twisted pair, coax, optical fiber)
- Flat wire / Flexible Printed Circuits

We see continued electrical/electronic content growth in the automotive industry. That will be in areas like mobile multimedia, X by wire (throttle by wire, break by wire and steer by wire), safety systems (airbags continue to see more penetration and all of the collision avoidance types of things) and convenience features continue to be something that customers are interested in.

We see thinner insulation and more small diameter cables. Packaging becomes an increasing problem as more and more content comes into play.

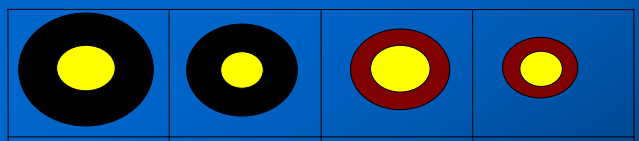
The global automobile industry continues to make significant strides in quality improvement and that has to happen at the supply base as well. We see that the use of multiplexing and electrical centers can slow some of the growth that the basic function content might drive. For the hybrid and fuel cell vehicles, that are being developed, we need more large diameter cables. There is great emphasis on green or environmental cables and some high frequency cables as well as flat wires and flexible printed circuits in certain types of applications.



This graph shows historically what has been happening to the use of cable in the auto industry. It basically shows when you that back in the 1950's for a conductor of this size we had a very thick jacket around it. You also see, as time goes on, that the rate of growth has made a significant change around 1979 with the advent of electronic engine controls. That growth has continued to the present day, whether you look at the number of wires or the feet of cables being used. We project that this is continuing for the foreseeable future. But some of the technologies are going to damp that rate of growth somewhat, basically because of the cost that packaging of cabling would bring.

Ultra Thin Wall Cable

- Current Production
  - Lead free PVC
  - 0.35 mm^2 through 0.8 mm^2
- Under Development
  - Polyester material available
  - Ethylene copolymer material under development
  - Cable samples available for 0.13 mm^2
    - Potential application- Infotainment connection systems
      - Insulation displacement terminations



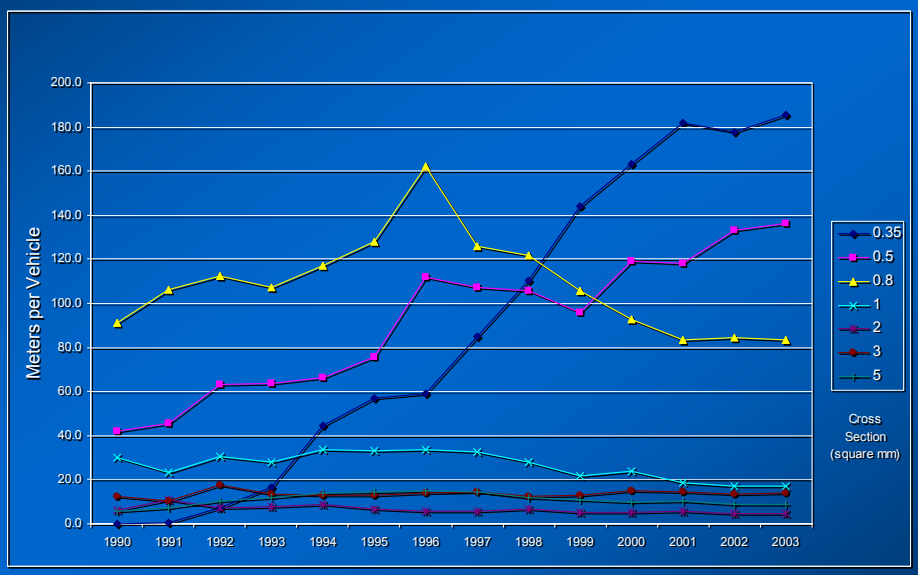
	0.35 mm² TW	0.13 mm² TW	0.35 mm² UTW	0.13 mm² UTW
% of 0.35 mm² TW Area	100%	68%	55%	33%

Area Analysis

We work with, what we call, ultra thin walled cables. For the same size core, you can see, that ultra thin wall (UTW) provides significant diameter reduction. We have this in lead free PVC cables and work with .35 mm^2 through .8 mm^2.

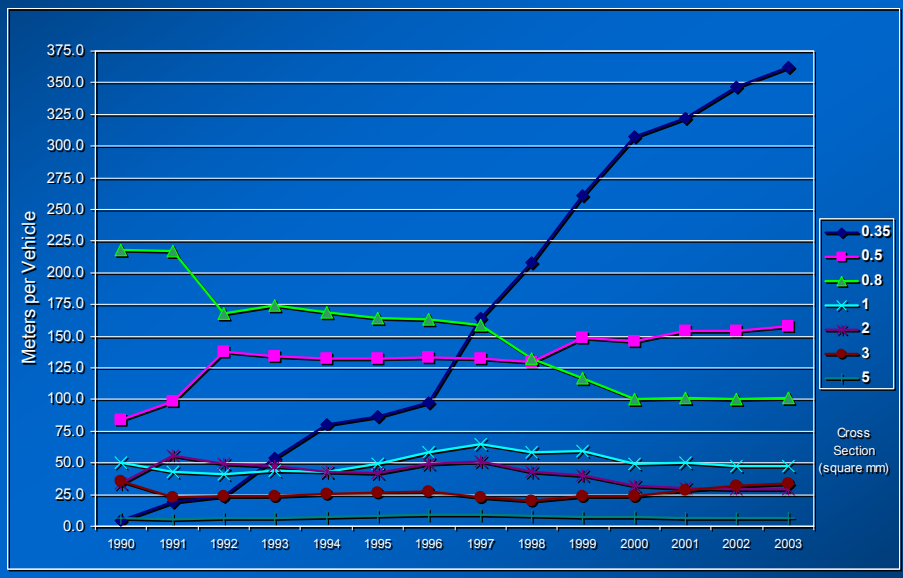
We also look at other insulation materials. We have polyester available and have been doing development work in ethylene copolymers. We have samples available for sizes clear down to .13 mm^2 for applications like infotainment systems. Most of those types of cables then would use some sort of insulation displacement or other type of terminations that can be done in an automated fashion.

XLPE Cable Size Usage

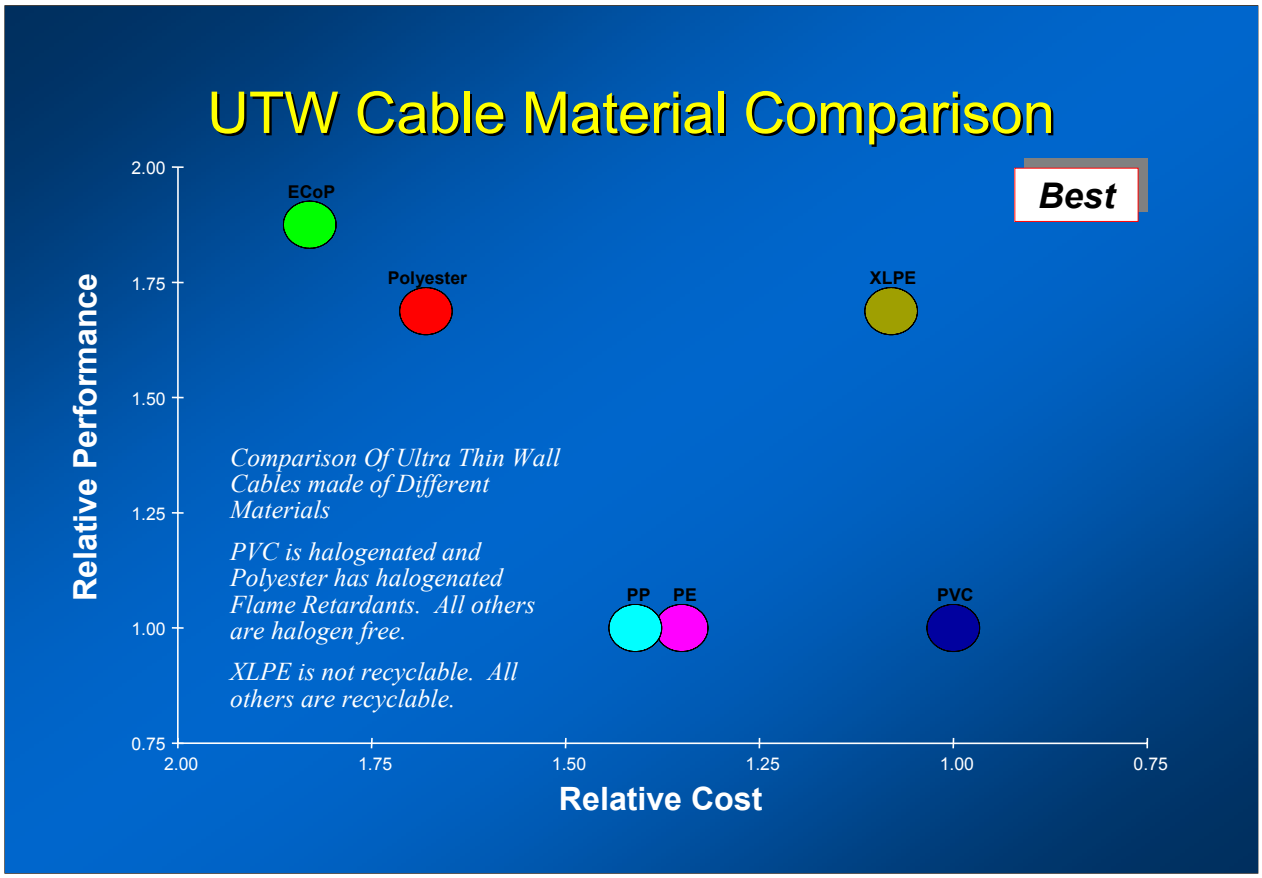


This is another chart that shows what has happened historically. This is for cross linked polyethylene cables (XLPE). We see here the meters per vehicle for each gauge size. Over that period of time the real heavy gauge applications have remained relatively constant. What has actually happened, is that .35 mm^2, the 22 AWG (American wire gauge), has really seen the growth. Because most of the cabling, which goes into a vehicle today, is used to transmit signal information not necessarily power. So, the amount of conductor, which is required, is not very much. We actually could go to smaller conductor sizes if we knew how to deal with the terminations and survive physically in the assembly plant environment.

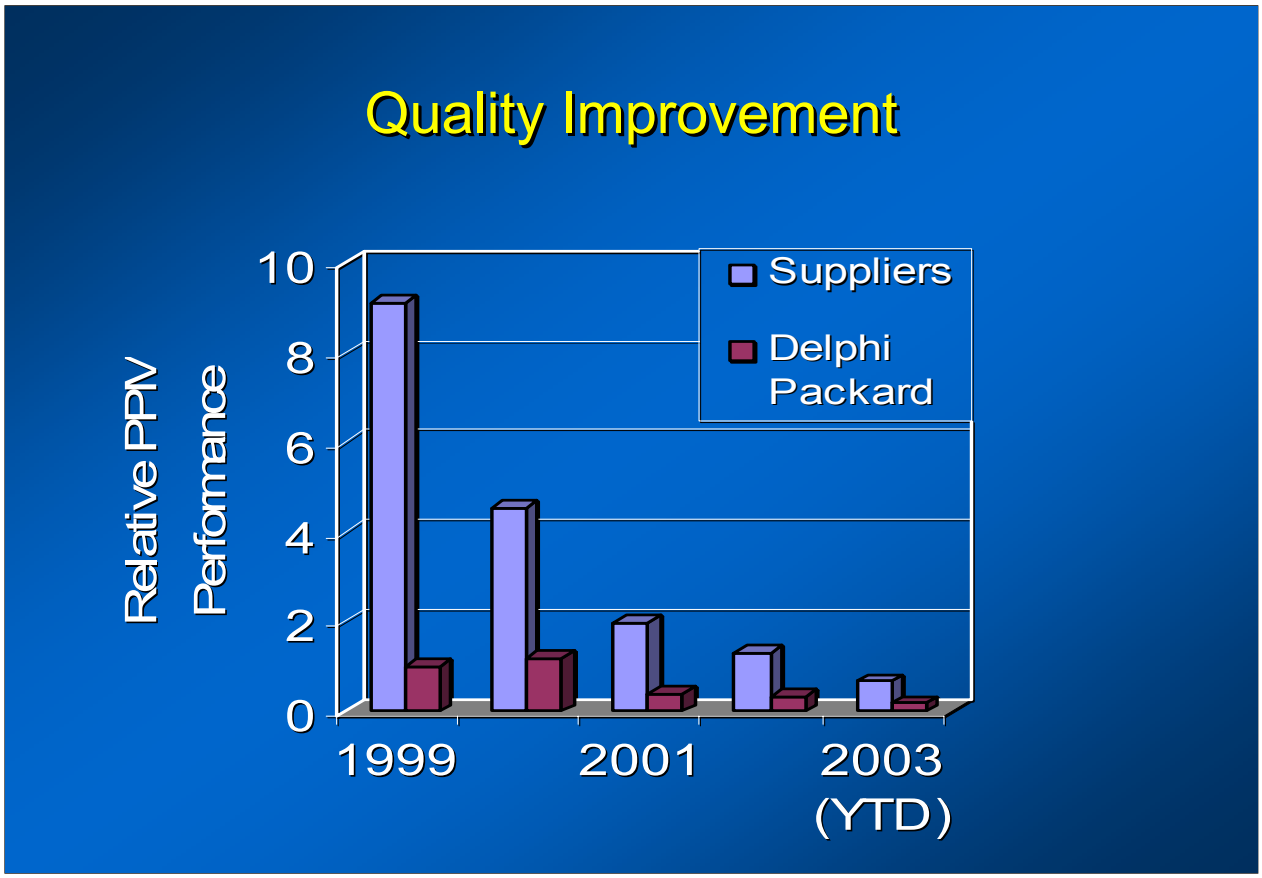
PVC Cable Usage



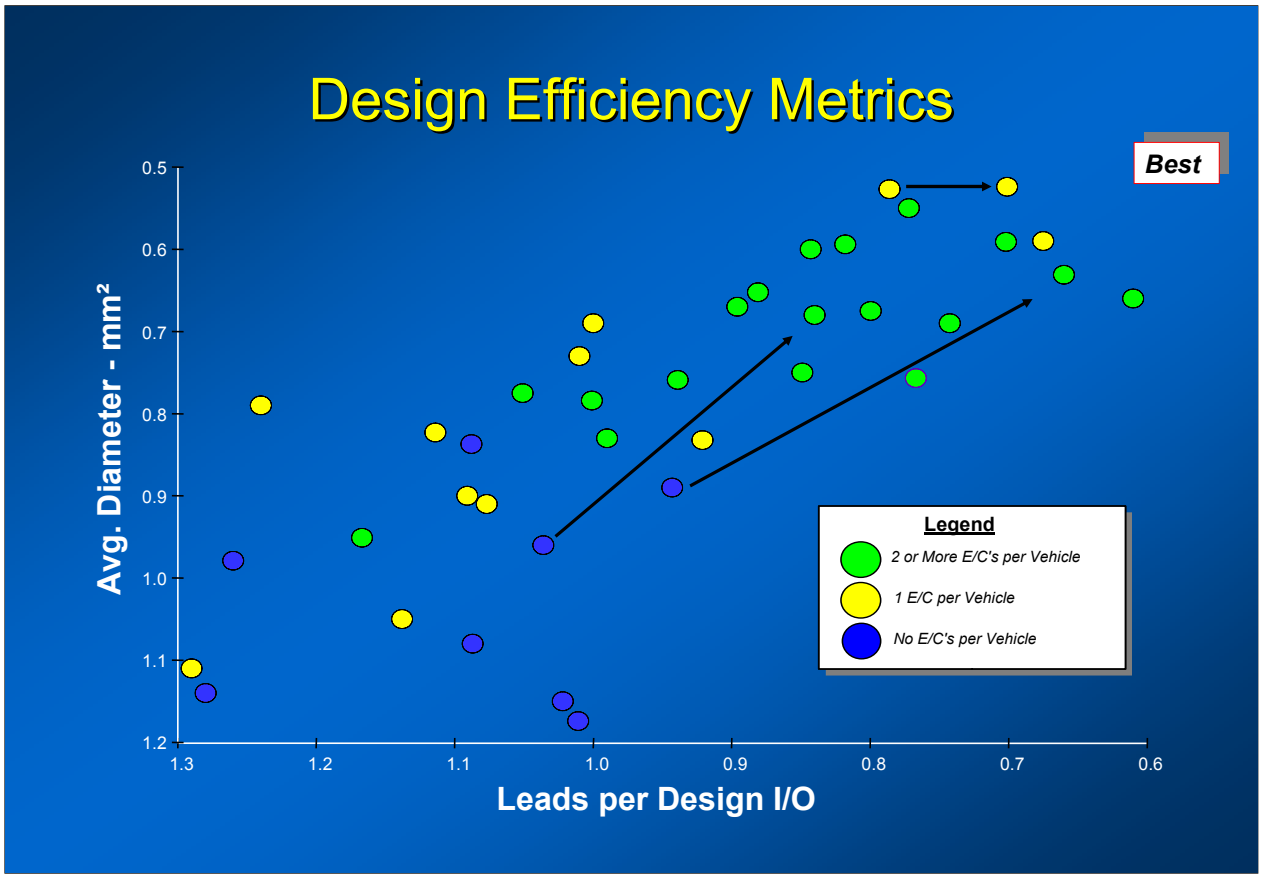
I also have a similar chart for PVC. You can see, that it has actually brought the use of .8 mm^2 down. We have seen a trend towards more individual circuits with their own fusing and circuit protections at lower values, so you have more smaller gauge cables.



This is a chart showing the relative performance versus relative cost of the different installation types for ultra thin wall cables. As a reference point we use PVC, the most widely used material. XLPE for higher temperature performance is up here with slightly higher cost. The problem is, when you use some of these other insulation materials, the cost adder. That is going to significantly impact the penetration of those insulations, until their costs reach more parity.

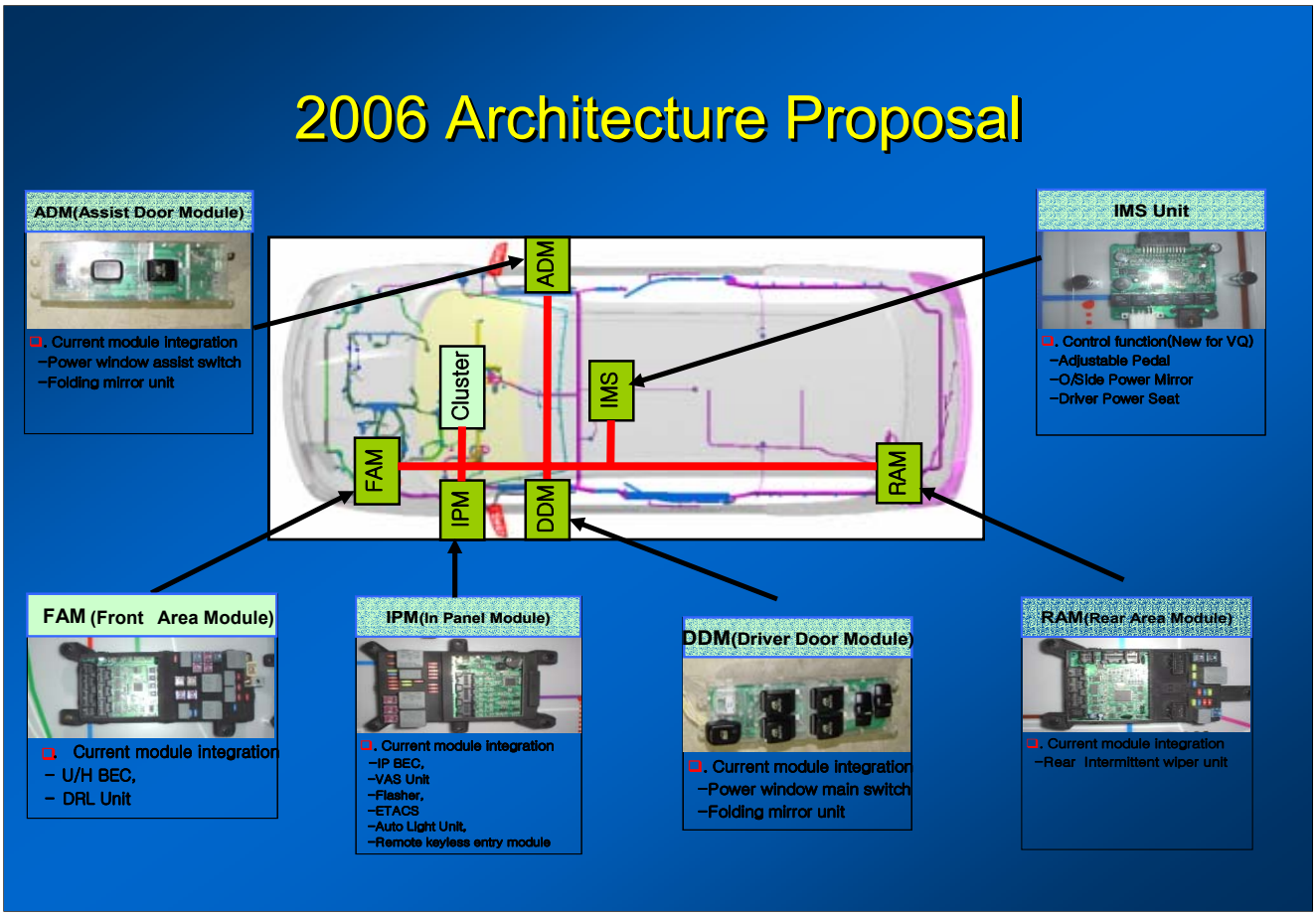


I'd like to talk a little bit about quality in our industry. I went back to 1999 and put this on a relative scale. This has been Delphi Packard's quality performance measured in assembly plant returns from our customers. We had a pretty good improvement over the last 4 years. I think, what is drastically important, is the marked improvement from our supply base over the same period. Quite frankly, we cannot reach the levels of quality performance that our customers expect from us until our suppliers are performing at that same level. So, we will continue to work with our supply base until they work in the same range of performance.

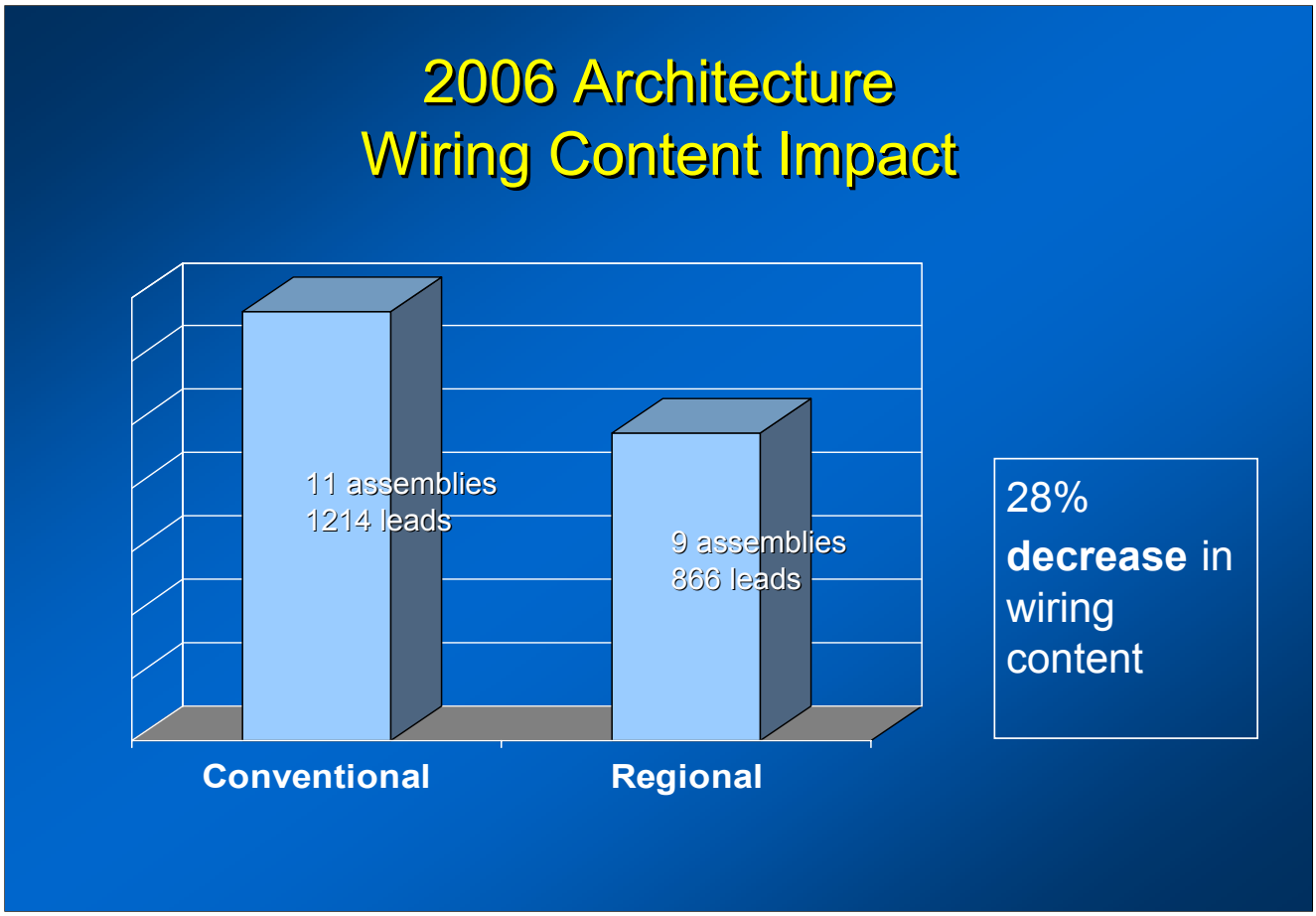


This slide shows the impact of some more contemporary architectures and how it impacts the design efficiency of wiring harnesses. The horizontal axis shows, how many wires it takes to implement an input/output (I/O) function. You think it should be 1. But actually it doesn't need to be. You can share signals between multiple functions. If you need coolant temperature in your climate control and in your engine control, they can share that signal and get design efficiency from that.

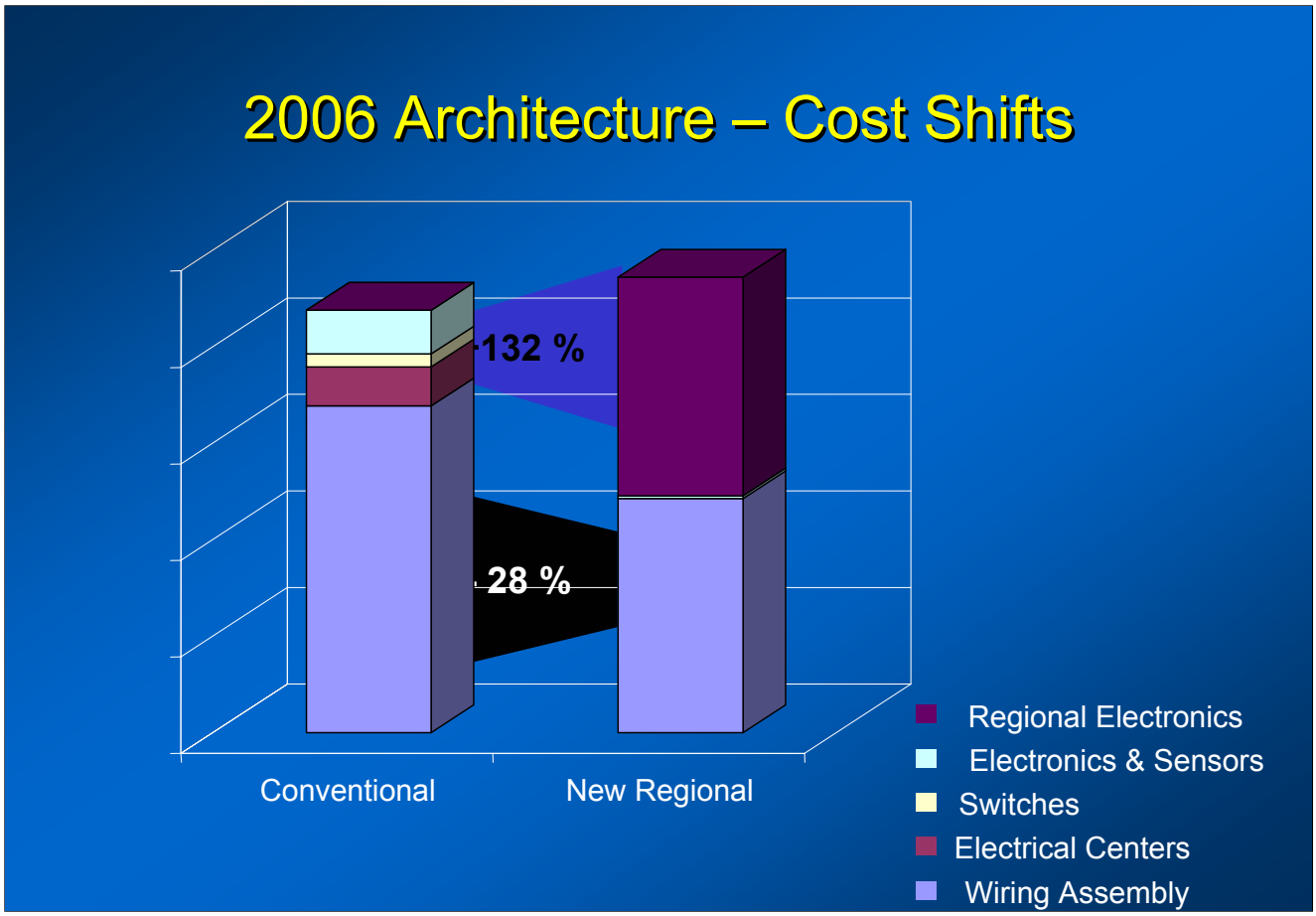
Then look at the average diameter of cable. If we go back into the 80's and early 90's without the use of electrical centers (E/C) that include bussing capabilities, we were down in the bottom of this chart. Then we moved through a series of vehicles (in yellow) with 1 E/C. They moved up, and then we had 2 or more E/C's (in green), which moved to the top right on this chart. We see much more design efficiency and smaller gauged cables resulting from the use of electrical centers.



How does technology service as a substitution for the use of cables? This is an overview of a program for 2006 we are currently designing for one of our customers. What they have done in this architecture is to place electronic modules in various regions of the vehicle. We have one in the front area under the hood, one in the passenger door, one in the instrument panel, one in the driver door, one in the body and one in the rear. These 6 electronic controllers all communicate over a serial data bus.

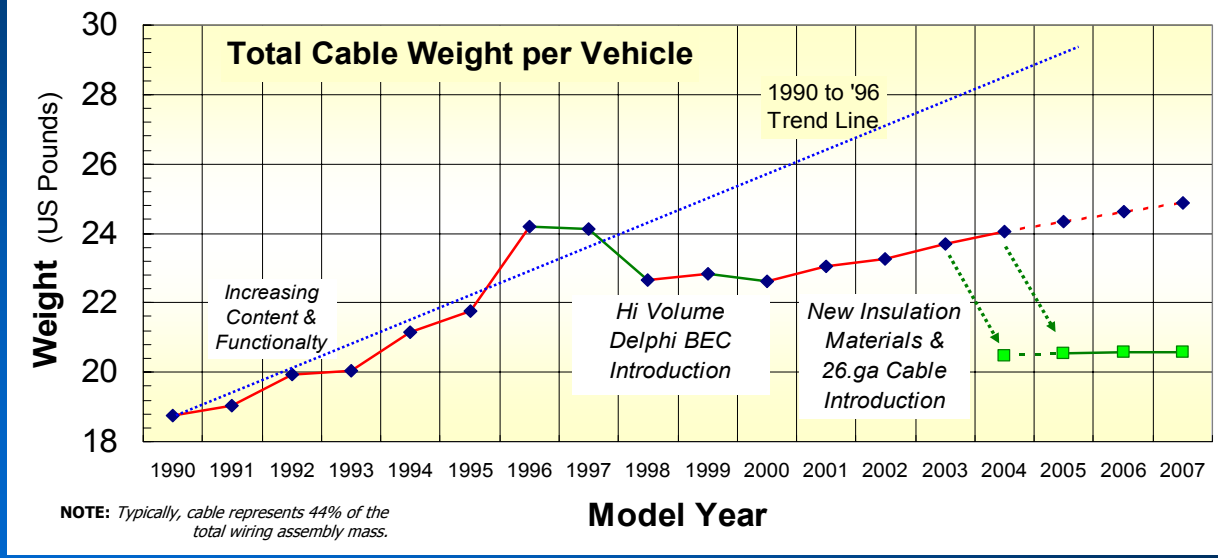


What does that do to the wiring content? If we look before, there would be 11 wiring harness assemblies and 1214 leads to perform those functions. We now have 9 wiring harness assemblies and 866 leads, a 28% decrease in wiring content. Remember wiring is not something a customer is buying.

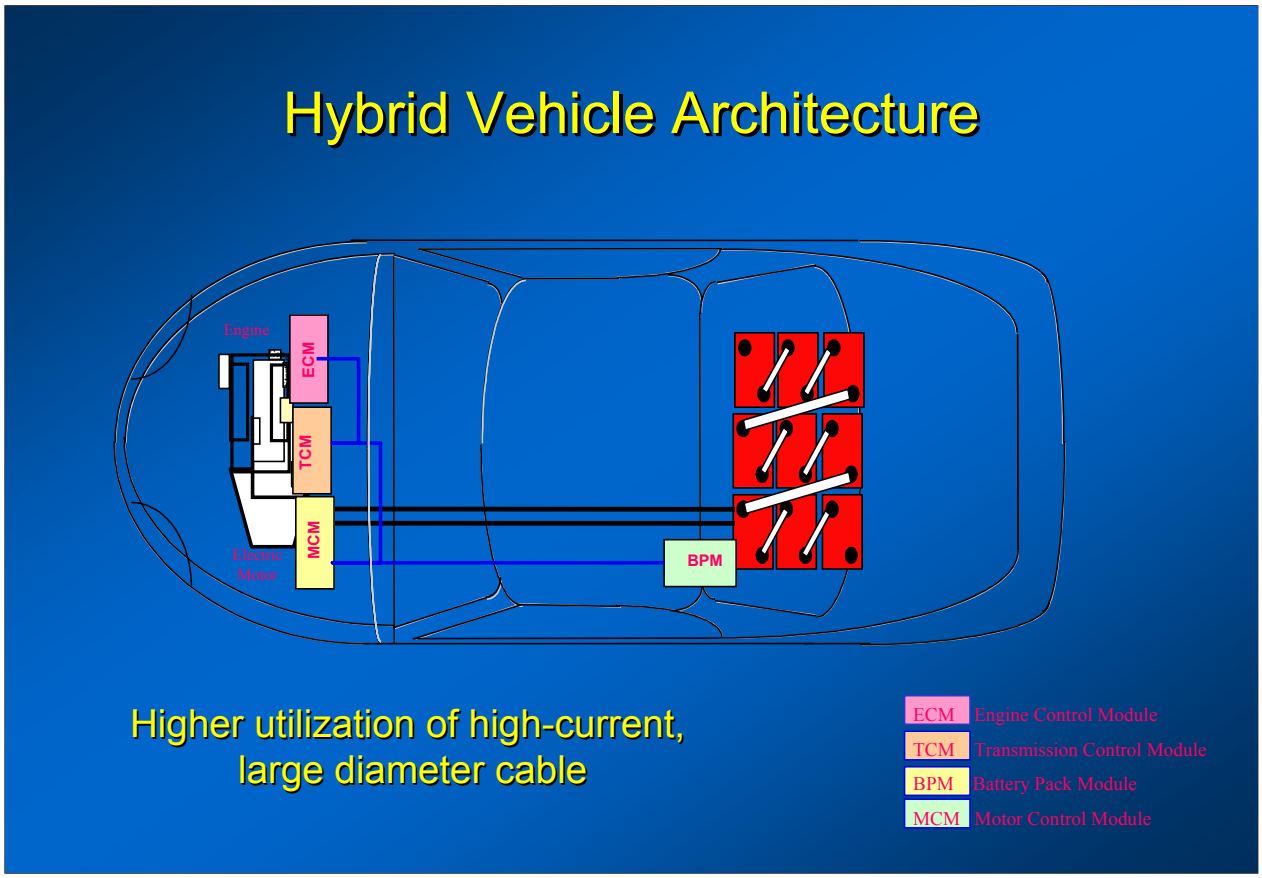


The interesting thing is: What happens to the value shift? In actuality the total value of the system and the functionality is slightly more. We see an 132% increase in the amount of electronics, sensors and switches that have displaced that function of the cabling. So, overall value more, cabling content less.

Mass Reduction



Mass reduction is related to the architecture and the cable size. We have a trend line going back to the early 90's. As we looked at bringing in the electrical centers that has brought the weight per vehicle down. As we look at the application of new insulation material and 26 gauge cables this lowers it even further. This again shows a shift to smaller cables.



We identify the development of hybrid vehicles as an important trend. This is some of the information I got off Toyota's website.

2004 Toyota Prius

- Gasoline/electric hybrid
- 58 kW Gasoline engine
- 50kW Electric motor / genera
  - Accelerating
  - Stop & go driving
  - Reversing
  - Regenerative braking
- NiMH battery
- Fuel Economy
  - Estimated combined city/highway >50 mpg

Interesting to me is the fact that the gasoline engine and the electric motor are almost of equivalent power. The electric motor generator is employed during accelerating, stop and go traffic, reversing and regenerative braking. It is using a nickel metal hydride battery. The fuel economy is estimated to be greater than 50 miles per gallon (mpg).

Definition of "Green" Varies by Region

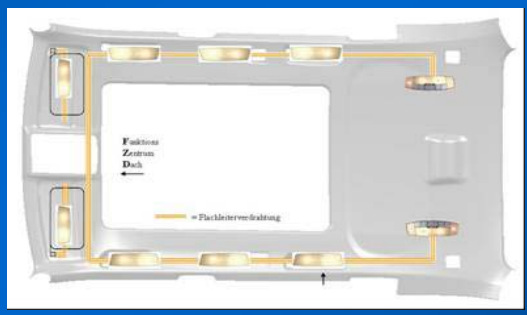
- USA
  - Heavy metals are a concern, PVC is lead free
  - No current drive to eliminate PVC
  - No current drive for halogen- free flame retardants
  - Thermoplastic products are recyclable
  - Current products of choice are lead free PVC and halogen free XLPE
  - Green = Free of heavy metals
- Europe
  - Heavy metals are a concern, PVC is moving to lead free
  - Legislation required PVC containing lead to be eliminated by 2003
  - Halogenated flame retardants for other polymers are still acceptable but not desired
  - PVC is considered most recyclable
  - Current product of choice is PVC
  - Development is underway for XLPE, PE and PP products
  - Green = Recyclable, PVC free, Heavy metal free (varies by country / OEM)
- Asia
  - Heavy metals are a concern, PVC has moved to lead free
  - Halogen free products are desired
  - Current product of choice is PVC
  - Development is underway for PE and PP to replace PVC
  - Green = Recyclable, PVC free, Halogen free and Heavy metal free

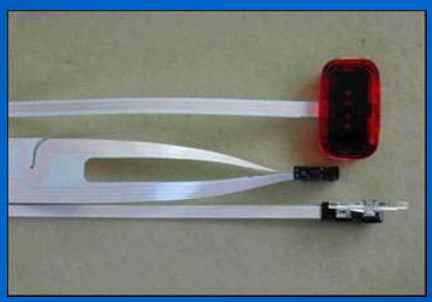
The definition of green cables varies by region as you can see from the slide.

As a global supplier working across the industry you have to be able to address these concerns and the regional differences.

Flexible Circuit Applications

- Flexible printed circuit advantages
  - Lower weight
  - Easily packaged
  - Integration capability
    - Wiring
    - Electronics
    - Connection systems





Another area of technology we see intruding into the conventional cable space somewhat is flexible circuit applications. I include in this flat cables and flexible printed circuits. The advantages of this technology are that it is lower weight, it can be easily packaged and it integrates well with either wiring or electronics or connectors.

On the right above you can see a layout of a headliner system. On the left you can see some LED's on a flexible circuit for lighting and on the left below a concept of a door, where flat cables are used to interconnect all of the devices on the dry side of the door.

Increasing High Frequency Signals

- Antenna Interfaces - Coaxial Cable
  - Traditional Radio
  - Satellite Digital Radio
  - Global Positioning Satellite
  - Cellular Phone
  - High-Speed Internet?
- Digital Data
  - Multimedia and X-by-Wire
  - Plastic Optical Fiber
  - Glass Optical Fiber?

With all of the additional wireless products and services in the marketplace, we see much more use of coaxial cables and other high frequency products in the vehicle. Today a wide range of coaxial cables and interconnects are desired. Additionally digital data are being moved for multimedia and X-by-wire. Plastic optical fibers are definitely in place now and the potential for glass optical fibers is being considered out a little bit, particularly in Europe.

In Conclusion

- Electrical / Electronic content will continue to grow
- Cost reduction will continue to be a major driver
- Alternative technologies provide some options for OEMs to replace conventional Electrical / Electronic system components
- More product variety will appear
  - Cable diameter
  - Insulation type
  - Physical configuration

As a summary let us look at the “Highlight Film”.

What does this all boil down to? In our judgment we are going to continue to see electrical and electronic content in the vehicle grow. However, the major impact to us, as we see it, is cost reduction. It is probably the single largest driver in our marketplace. There are some alternative technologies that give options to carmakers, to replace conventional electrical/electronic systems with other types of architectures, and then more variety in the cables being used. We will see more different cable diameters, particularly at the extremes, smaller and very heavy insulation types and physical configuration.

Thank you very much!