Autonomous Technology and the Automotive Industry

Q&A session with automotive industry expert John McElroy

AUTOLINE WITH *John McElroy*   **Blue Sky Productions**

**Blue Sky Productions President and
Host of "Autoline Daily," John McElroy**

Q: First of all, where do you see autonomous technology taking the automotive industry?

A: There are going to be a lot of steps along the way, but the long-term result is going to be a transformation of the vehicle fleet to autonomous vehicles. Whether it's individual passenger cars, whether it's taxis, whether it's trucks, you name it, autonomy is going to be the wave of the future in all motorized vehicles.

It takes roughly 25 years to turn the fleet over in the United States. For example, if the first fully autonomous car hits around 2020, it would take until about 2045 until everyone has one, or perhaps even longer.

Q: Can people truly trust these "robot" cars to be safe and not malfunction?

A**:** Ninety percent plus of all traffic accidents are caused by human error. I would say rather than worrying about if computers can drive these machines safely, that clearly humans are far worse than computers. Undoubtedly, there will be failures with autonomous cars, but there is still the opportunity to eliminate over 90 percent of all fatalities, injuries and accidents.

Q: What entities helped to advance this technology?

A: The U.S. Military is what really advanced so much of this autonomous technology because half of the combat fatalities overseas were with truck drivers delivering supplies. The Defense Advanced Research Projects Agency (DARPA) decided that giving a truck the ability to drive by itself, or making it autonomous, would, right off the bat, eliminate half of the battlefield causalities. That is where it all came from.

Q: A lot of technologies have come together to get to this point. What are some initial developments you see happening with autonomous cars?

A: The first applications will be in controlled environments. For example, both Komatsu and Caterpillar are already making, selling and delivering autonomous mining trucks to the iron ore mines in Australia. These trucks have been running 24 hours a day for close to two years without any issues whatsoever. So, it's already happening.

The next step is likely to be in another controlled environment such as a campus. A college campus, medical campus, research and development campus or even a retirement community are all options where these vehicles will only operate within certain given boundaries.

The third step will probably be something that Daimler just showed with semi-trucks, especially those that do coast to coast runs. Autonomy will immediately address the issue of the lack of truck drivers we have. I think the last step will be cars that anybody can go into a showroom and buy.

Q: How about pricing? Will these vehicles be affordable for customers?

A: Oh yeah! One of the primary technologies that enable autonomous cars is called LIDAR, a laser-based radar system. When they first came out, this technology was about $70,000. The newest generation from one company costs about $8,000. And another company showed me a version for only $250. Obviously, it wasn't nearly as capable as the more expensive LIDAR

system, but you can put four of them on your car at each corner for only $1,000. At the end of the day what you're talking about are sensors, algorithms and computing power. There is no reason that has to cost a fortune.

Q: Do we know what the liability issues might be if something goes wrong? Would it be from supplier to OEM or from OEM to customer? Or could it be from service repair shop to customer?

A: Of course things will inevitably go wrong, but again I don't think it will be anywhere near the level of human beings making mistakes. Since humans cause 90 percent of accidents, that still means something like 10 percent is caused by the vehicle failing. That is probably what we will see with autonomous cars, maybe a little bit better. But I think it is pretty obvious who will be held liable: the automaker-entity that sold the car, unless they can pin the blame on a supplier. To me the liability will be fairly straightforward. It will take a couple of years to get solved in court, but will be resolved relatively quickly.

Q: Which automaker do you think has the clearest vision and is the furthest along?

A: It's hard to say because some are more public than others about what they are doing. But clearly Audi has been more heavily involved in this than any other automaker and has been the most aggressive. Mercedes is talking a whole lot more about autonomy of late, and arguably the S-class Mercedes has the most technology related to autonomy right now. My guess is Audi is on the lead,

Mercedes is on its heel and then it's anybody's guess where the rest of them stand.

Q: Where do you see the market in five years? Ten years?

A: In five years, I think we'll see the first fully autonomous cars in the marketplace, though they still may not be in showrooms. I'm talking fully autonomous or what they refer to as 'Level 4' technology cars.

By the end of the decade I think we'll see almost every car with some kind of Level 3 technology, where, once you turn on the cruise control, the vehicle will do all of the accelerating, breaking and steering automatically. But this will only happen on highways and roads with low amounts of cross traffic. Then, in the next decade I think we will see more and more autonomous cars showing up and increasing capability. By 2030 autonomous cars will be very common.

Stayed tuned for **Part Two** of our interview with John McElroy next month in the **June issue**.

New York Times Business Best-Sellers: as of May 2015

"Get What's Yours," by Laurence J. Kotlikoff, Philip Moeller, and Paul Solman (Simon and Schuster, $10.48). A guide to deciding when to claim Social Security benefits and how to get all of what you're eligible for.

"Dealing With China," by Henry S. Paulson Jr. (Twelve, $21.51). The former Treasury secretary explains how American business and political leaders can work with China.

"Becoming Steve Jobs," by Brent Schlender and Rick Tetzeli (Crown Business, $15.71). How Steve Jobs developed a more mature management style over the years.

"Money: Master The Game," by Tony Robbins (Simon and Schuster, $13.39). Finding financial security and creating an income for life in seven steps.

Business Marketing Insights

5 Reasons to Use Integrated Marketing Communications

1. It drives consistency:

All key messages headlines, charts, images and other components used in marketing campaigns should be consistent – and an integrated approach drives consistency. In fact, any inconsistencies quickly become very apparent early-on and so are easily fixed.

2. Tools are aligned:

By assuring each element of a campaign drives toward an ultimate target, integration assures all tools are aligned and focused on the same goal. The "Say-Do" gap is closed.

3. Cost savings:

Integrated campaigns save money because a lot of the materials can be reused or repurposed. Costs are reduced, redundancies are eliminated and prioritized activities drive efficiencies.

4. Common purpose:

When communications are focused and aligned – so are the communicators. Rather than stove-piped marketing, sales, corporate communications, public relations and investor relations – the company-wide communications team speaks with one voice and because of it, the company looks united. This becomes obvious to employees, shareholders and customers who tend to view such organization positivity and prefer it to competitors.

5. Results:

Integrated campaigns make it easier to track metrics and results, and tools are leveraged to support one another. So – an earned media placement might draw attention to an ad, the ad to a web page – and vice-versa. All are customer-focused and/or driving to a common end-point.

The chart (right) shows the correlation between the subject line length of an email, and the read rate of the email.
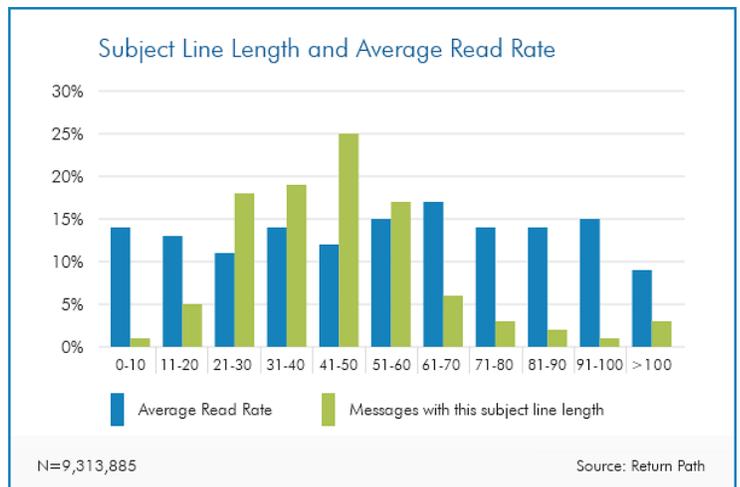**Sources: Return Path, Marketingsherpa.com**

How Length of an Email Headline Correlates with the Read Rate

Data solutions provider Return Path analyzed 9,313,885 emails from more than 3,000 retail senders from February 2015 in an effort to see how subject line length affected average read rate. Is there a certain word or character limit to stick to when sending out emails, or is it OK to test out longer headlines?

Here are some key findings of the study:

• The most frequent amount of characters used was 41 to 50, with 25 percent of analyzed emails in this range.

• Mobile devices may limit the amount of characters displayed in an email headline.

• Surprisingly, character lengths ranging from 61 to 70 had the highest average read rate, at 17 percent.

• According to Return Path's "The Art and Science of Effective Subject Lines" report, there is actually no correlation between length of a subject line and its read rate. The Pearson's correlation value was just –0.3 percent, which means there is no relationship between headline length and read rate.

It is important to remember that the data is only in regards to read rate, not overall conversion. Average read rate is defined as the number of email recipients who have marked your email as "read" in their email client.

Subject Line Length and Average Read Rate

Legend: ■ Average Read Rate ■ Messages with this subject line length

N=9,313,885   Source: Return Path