How New Ways of Seeing the World Are Changing Insurance

From Microsoft’s sophisticated HoloLens to Snap Inc.’s somewhat frivolous Spectacles, we’re seeing a marked increase in smart glasses coming to market. Now, with the recent introduction of Google Glass Enterprise Edition, the technology may have found a mainstream application. In fact, Research and Markets predicts the market for smart, augmented reality glasses revenues will grow from about $140 million today to almost $20 billion by 2022.

According to Robert Scoble and Shel Israel, authors of “The Fourth Transformation,” we’re entering a new stage in technology transformation, one in which augmented reality and artificial intelligence are merging, and smart glasses are leading the way. With that, we may even see a move away from devices we carry—smart phones—to devices we wear—smart glasses, or eventually, contact lenses and looking far into the future, perhaps ocular implants.

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So what does this have to do with the Property & Casualty and collision repair industries? A lot, it turns out. Smart glasses may change the way people in the insurance ecosystem work—streamlining workflows, ensuring complex vehicle repairs are done correctly, and possibly even reinventing the healthcare paradigm.

Augmented Reality & The Enterprise
Smart Glasses Hit Their Stride

In 2013, 8,000 or so Google Glass enthusiasts thought the first iteration of the devices were cool enough to shell out $1,500 each for them. While Explorers, as the new owners were called, may have been pretty happy with the devices, people around them found them more bothersome than cool. People had privacy concerns. They were understandably uncomfortable with the idea that they might be photographed or videoed, and some businesses responded by banning them altogether.

It was clear from the get-go that Google missed its target audience. The general public wasn’t ready—the enterprise would have been a much better fit. Competitors learned from Google’s experience: smart helmet maker Daqri circumvented consumer acceptance and privacy issues by using similar technology to guide workers in high-risk environments.

When Google reintroduced Google Glass this past July, this time focused on workplace applications, the audience was a better fit and the market was ready. Google Glass Enterprise Edition is better in many ways. The technologies behind it—augmented reality and natural language processing—are more advanced, they offer more computing power, and it no longer has integrated frames. It can be worn with any eye wear, including safety glasses.

More than 50 companies are already using it, including GE, DHL, Boeing, Volkswagen, and numerous healthcare companies, and the applications are endless. GE Aviation employees, for example, use it to guide airplane repairs and inspections. It’s much safer—they don’t have to climb ladders with paper instructions in their hands.

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There are likely to be many use cases for smart glasses in the P&C and collision repair industries. One can see how collision repairers could use the glasses to guide them through increasingly complex repair procedures, ensuring they are done correctly and the vehicle is safe and road-worthy. They might even use the photography function to document the vehicle before and after repair. Healthcare workers are already using the glasses to dictate notes in real time. Not only do they get to spend more time focused on patient care, their notes are more accurate—both things that may enhance quality of care.

Artificial Intelligence Gets In on the Action

Artificial intelligence is a broad term that encompasses many different technologies. Computer vision is just one. Computer vision is the technology that allows connected and driverless cars to “see” obstacles and
avoid them, but it has many other applications as well. In fact, Mitchell is exploring a computer vision application that uses image recognition to confirm repair vs. replace decisions.

Recently, computer vision researchers at Carnegie Mellon demonstrated the ability to detect and understand small movements, such as a person using his thumbs to text, in real time—even in a large group of people. This is an important advancement. Looking toward a future when computers will be embedded in everything, this type of technology could allow us to interact with them in new ways—by pointing, for example, instead of by speaking or keying in text.

Another potential application: you are driving your computer vision-enabled connected car or riding in an autonomous vehicle. There is a crowd of people standing on the curb near an intersection. Sophisticated computer vision could be able to predict, based on the smallest gestures, that one of the people in the crowd was about to step into oncoming traffic, and you or your car could respond accordingly.

**Augmented Reality & Computer Vision**

**Technology’s New Power Couple**

Now imagine putting the powerful computer vision I’ve just described into the smart glasses form factor. Computer vision, backed by machine learning algorithms, could conceivably take in real-time information about the environment, evaluate it against thousands of examples in its database, and push immediate recommendations to you via augmented reality. If the pedestrian were wearing computer vision-enabled smart glasses, they could receive an alert advising them not to step into traffic.

Other examples: instead of an automotive repairer just getting guidance on the next step in a given repair procedure, they could get real-time evaluation of ancillary problems detected by computer vision. A worker crossing a factory floor might be warned of an impending risk—a slippery floor that should be avoided. A surgeon in an operating room might be guided through the process and advised on the best way to address the unpredictable variables that are likely to arise. It might even take into consideration the individual patient’s genetic background and health history.

While the scenarios I’ve described are futuristic, especially in such a small form factor, the two technologies are already coming together—in agribusiness, of all places. Huxley is using a combination of augmented reality and artificial intelligence to monitor plant growth in greenhouses, maintain optimal environmental conditions, and recommend harvest dates.
As individual disciplines, augmented reality and artificial intelligence both have valuable applications in the broad P&C claims ecosystem today, but we’re a long way from realizing their full potential. I suspect that when combined, the real-world applications for the two technologies will far surpass anything I’ve imagined here. Either way, I’m looking forward to seeing the future unfold.