Foresight Automotive's clear vision for autonomous technology

By Calum MacRae | 25 January 2018

Foresight Automotive is an Israeli automotive technology startup that develops ADAS and autonomous vehicle technology. At the 2018 CES in Las Vegas just-auto's Calum MacRae caught up with Doron Cohadier, VP Business Development at the company.

just-auto: So tell me about Foresight Automotive and its products

Doron Cohadier: We were founded in July 2015 and we are focused on developing advanced safety systems for the automotive industry. We work using stereoscopic camera technology.

j-a: I was told that the technology was derived from Israeli military technology?

Doron Cohadier, VP Business Development, Foresight Automotive

DC: Not exactly. The technology was derived from our main shareholder Magnum BSP, which specialises in security solutions - border security, airport security, drone security etc. - which is based on stereoscopic imaging.

j-a: And what are you demonstrating this technology in today?

DC: What you see here today is the QuadSight. QuadSight is a system based on vision. Four cameras, two sets of stereoscopic cameras one set infrared and one set visible light. There are three components here, in the system. There's what you see on the roof - the four cameras - the display and there's the computer. In the demonstration here you see a recording of the work that we've done. It's obviously a 2D image, you won't get the 3D image here.

j-a: What sort of scenarios have you planned with the demonstrator?

DC: I'll go through a few here, so you'll understand the capabilities of the system. The further away from objects you are they are blue the closer you get they become red. In this scenario you'll see a lane departure. The systems will warn that the car is deviating from the lane and show you the correction needed to get back in the lane.

j-a: And it's using lines in the road, so if you have snow or low-visibility?

DC: You're obviously limited in a scenario like that. Other visible light scenarios that we have set up include traffic sign recognition. For example if you're looking at a sign that's changing and reducing speed we're looking at sign that's changing and reducing the speed. So if you are higher than the speed, then it will alert you, if you're lower it won't.

j-a: And with infrared?

DC: With infrared we can work in night-time and low-light environments, like severely inclement weather. What we bring to market is a system with a very sophisticated sensor, based on vision, and driven by advanced and proven image processing algorithms, that will deal with all weather and lighting conditions. Its range is up to 150 metres and has 45 degree coverage. At a 100 metre distance it can detect a 35cm by 25cm object.

j-a: Does this system make LiDAR redundant for L4 and L5?

DC: We believe that from the autonomous perspective that vision is of most importance. As a system, it may eliminate other technologies, but I couldn't say if it will eliminate a specific technology. Each technology has its own limitations and an autonomous vehicle will have a few technologies for redundancies purposes.

j-a: Do you have any firm interest from OEMs?

DC: We're in discussions with some OEMs and Tier 1s. We're planning on having a demo system by the middle of 2018 and towards H2 2019 we'll be ready for commercial availability.