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Bill Martin, MD, Zeroshift

Phillippe Keribin, gasoline project leader, PSA Peugeot Citroën

Uwe Grebe, executive director, advanced engineering, GM Powertrain


PROFILE
Name: Bill Martin

Age: 47

Occupation: Managing director

Company: Zeroshift

“Our transmission system represents a low-cost way of achieving what car manufacturers want: low weight, compact size and perfect shift quality”

Is there really going to be a clear, dominant technology in the transmissions world? Bill Martin, Zeroshift MD, says yes

■ **Formed only five years ago**, Zeroshift has made great strides in the automotive arena. According to the company's managing director, Bill Martin, Zeroshift offers an efficient, cost-effective alternative to manual and automatic transmission technologies.

“I knew that the concept of the technology had potential,” says Martin, “so I needed to form a company around the technology to be able to commercialize it and develop it further.” What drove Martin forward was the lack of product offerings in the market that were able “to be the simple, effective, low-cost solution that Zeroshift could be”.

Many credit the rise of Zeroshift to Martin's determination and belief in the technology. Despite admitting the system “could have been done years ago”, it was Martin's perseverance that led to the creation of the first technology demonstrator of the transmission. Four years later and the New Zealander insists that with modern electronics and sensors, “it's pretty hard to imagine where a gearbox could go after Zeroshift”.

Confidence indeed, but the technology supports Martin's enthusiasm: “Our transmission represents a low-cost way of achieving what car manufacturers want: low weight, compact size and perfect shift quality. Similar things that the industry is working on to gain additional efficiency actually cost a lot of money. Zeroshift is a way of increasing the efficiency of the vehicle, while costing less than the technology it replaces.”

So what is it that the company, which has expanded from a team of two to 28 in just five years and has business sites in India, Japan and France, has to offer its customers? “A client chooses a vehicle for which they want to develop a Zeroshift system. We get an instruction of exactly what vehicle and gearbox are going to be converted and we quote for the program.

“Generally speaking, the projects involve the conversion of a customer's conventional manual architecture, so it'll be based on their manual gearbox or their AMT. We get the parts machined, pull apart the transmission and reassemble it with new parts, and install it into the vehicle. Our transmission control unit is then added to the vehicle, and is then connected to the ECU.”

Martin is confident that the next twelve months will be even more successful for the Milton Keynes-based company, which invested over




Zeroshift's second-generation technology has been improved to deliver further advantages to auto OEMs

US\$4 million in developments this past year. The focus now will shift on refining the system, notably controls and calibration. “We are working on the way it feels, and to make sure that it's perfectly smooth and silent on every shift and every shift type,” he explains.

“We have been improving the functionality of the clutch control and the response speed. This has been done by using computer-based driveline simulation for algorithms, supported by many hours of on-road development. On the mechanical side, we have been building damping into the system, which is completely undetectable, so it offers smooth and silent shifts. You can't feel anything in the car, unlike an automatic or a dual clutch. With these systems you feel the shift in your body.”

Martin steadfastly sees Zeroshift as the way of the future, replacing the planetary auto and the dual clutch. “That would leave Zeroshift and manuals,” says the MD. “By that time, Zeroshift automatics, which would be based on manuals, would not be much more expensive than the manual, so the reasons for anyone choosing the manual fall away.” **ETI**

Karl Vadaszffy



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