



Interviews with development team:

Yuichi Ushiroda

What type of system is S-AWC?

S-AWC, or Super All Wheel Control, is a 4WD-based vehicle dynamics control system that integrates management of the individual ACD, AYC, and Sport ABS component systems. For Evolution X S-AWC now incorporates Active Stability Control (ASC), which brings regular braking under its integrated management. While previous versions of S-AWC integrated management of the ACD and AYC drive-torque regulating systems, they did not implement any control over braking force.

In its latest version, S-AWC also brings braking force into the equation in its integrated management of the various component systems. It regulates torque and braking to control straight-line traction, acceleration, and stopping performance as well as controlling directional performance through corners, it integrates management of all these component systems to control all these performance factors.



What benefits does S-AWC deliver?

The new S-AWC system incorporates yaw rate feedback control for the first time. The system uses sensors to monitor differences in the way the driver wants his vehicle to behave and in its actual behavior and regulates torque and braking accordingly. It does so in a seamless manner by matching regulation to the driver's operation of his vehicle so that he is unaware that the system is actively exerting control. If, for example, the system were suddenly to kick in, to suddenly start operating, that would produce a change in the way the vehicle reacts, in its behavior. Normally this type of control system makes the driver aware when it comes into operation but we have managed to develop the new S-AWC to the point where the driver is unaware it is exerting any control by having it operate very smoothly and seamlessly in normal everyday driving situations. So the driver is unaware that it is actually regulating various parameters that it is actually operating to help the car behave in the way he wants it to.





S-AWC enhances safety

The fact that S-AWC raises the performance limits of the vehicle's systems means that the driver can drive his car up to those limits without any special skills. And the fact that those limits are now higher significantly increases the margin before things start to get dangerous. In other words, S-AWC raises the limits up to which the driver can drive his car safely. That's the first benefit.

Another benefit is that for Evolution X we have added Active Stability Control to the S-AWC arsenal of component systems and the addition of this system that brings vehicle behavior back to safer territory when it gets near its handling limits means that the latest S-AWC realizes higher safety performance than previous versions.

Significance of fitting S-AWC to Evolution X

The significance lies in delivering the "driving pleasure" and "reassuring safety" that Mitsubishi Motors lists as two major objectives in its corporate philosophy.

When we set about developing the system, our primary focus was on seeing just what was possible, what kind of behavior we could realize in Evolution, the flagship in the company's lineup, and these are the ideals we wanted to deliver. We thought that this would show customers the direction MMC is taking in terms of vehicle dynamics control and just how well it accomplishes this.

As a developer of S-AWC, what does Evolution X represent for you?

With Evolution X, the use of yaw rate feedback in a variety of control parameters and the addition of brake force control has produced a system that operates extremely smoothly, one that leaves the driver unaware that it is actually operating while allowing him to drive his vehicle much faster. I am confident that S-AWC is a system that allows a wider range of drivers to enjoy Evolution's performance with confidence, and it would make me really happy if they would try it and experience those benefits for themselves.

