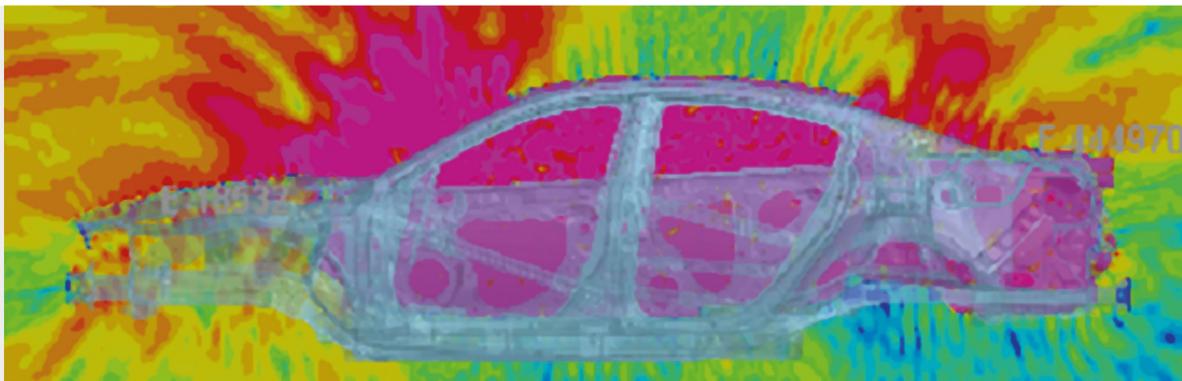


Mazda Adopts ESI CEM One Exclusively to Yield the Most Innovative Products



Challenge

As automotive electronics continue to increase, Mazda's Integrated Control System Development Div. must keep up with the increased workload, while meeting deadlines and without compromising a state-of-the-art strategy that features coupled simulation techniques.

Benefits

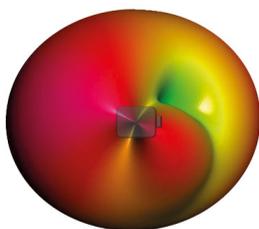
By integrating the latest version of ESI CEM One – which couples Method of Moments (MoM) with the Finite-Difference Time-Domain (FDTD) method - into their workflow, Mazda was able to decrease time spent on low-value tasks. Now, engineers can focus on producing the absolute best, most innovative products possible.

"Compared to before, the amount of time and the number of processes has been drastically reduced using the latest version of ESI CEM One. Thanks to that, we can spend the extra time leading up to deadline on more creative 'trial and error', instead of trivial things like data conversion. We can fulfill our duty and pursue the best product we are capable of producing to our heart's content.

During the trial period, it also reconfirmed that the ESI Group technical support is excellent."

Mr. Yasushi Hamada

Staff Manager of Integrated Control System Development Div.
Mazda Motor Corporation



Standalone VS Integrated Sensor

Story

Mazda Integrated Control System Development Div., a department within Mazda Motor Corporation, conducts research and development of in-vehicle electronics and its relationship to other related automotive equipment. Electronic equipment includes keyless entry, side collision prevention devices (automotive radar), and the Mazda Connect system (a next-generation car connectivity system that enables users to safely enjoy the convenience of a smartphone when in their car). As technology continues to evolve towards 'connected cars', the number of automotive electronic devices has greatly increased, and will continue to increase, making the internal electromagnetic environment control even more challenging.

To address these growing challenges, Mazda uses ESI CEM One electromagnetic simulation software solution. As users of CEM One since 2010, they upgraded to the newest version in 2015 in order to run Finite-Difference Time-Domain (FDTD) and Method of Moments (MoM) simulations. MoM is best for analyzing small objects with high accuracy whereas FDTD is optimal for analyzing large objects such as an entire vehicle. Before switching exclusively to ESI CEM One, Mazda was using a different tool for MoM analysis.

Since Mazda transitioned to using ESI CEM One exclusively (with coupled MoM and FDTD analyses), all of their analyses can now be run on one single and fully coherent software platform.

Data coordination is running smoothly and the number of hours spent and processes run have been drastically reduced. In addition, Mr. Yasushi Hamada, Staff Manager of Integrated Control System Development Div., Mazda comments that working with ESI's support team again reminded him of the high quality assistance they deliver to their customers. *"I have connections with a lot of software companies and ESI's technical support is outstandingly quick and better in quality than most others".*



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