Silvertip Design takes out Trailer Innovation Award

One of the technical highlights at IAA was the revolutionary Steering Correction Mechanism (SCM) pivotal bogie steering system, which was presented with the Trailer Innovation Concept 2007 award.

Designed by Silvertip Design, this SCM system has a trailer chassis mounted on a turntable above a rear bogie. The bogie has one non-steered axle at the front, a steered axle at the rear and room for a mid-lift axle in the centre if required.

By using a lightweight fabricated 'swinging box', a 'compensation link' and a 'steering link', Silvertip Design claim that the SCM offers vastly greater vehicle stability, manoeuvrability and improved operational efficiency and economy.

Carl Henderson, Owner of Silvertip said, "The presence of the turntable reduces the side forces imposed through the fifth wheel and so improves the stability of the tractor unit."

"The vehicle drives as any normal articulated vehicle, but instead of swinging wide before a corner the driver keeps the tractor just inside their own lane and the bogie simply follows," he explained.

"Although the concept semi-trailer is over 16 metres long, it manoeuvres like a vehicle half it's size. It can be steered both forward and backwards along the same curved path or locked to make it even easier than a normal articulated vehicle to reverse to a loading bay in a straight line."

Carl added that as demands on the already heavily trafficked roads in Europe increase, longer, fully steered semi-trailers will offer a means to significantly improve transport efficiency, reduce road wear and improve traffic flows.

"The passive SCM steering system is simply light and affordable. It uses predominantly off the shelf components and is easily maintained," he said. **TBB**

Silvertip Design Owner, Carl Henderson, collecting his Trailer Innovation Concept award from Dr Kunibert Schmidt, Managing Director of the German Association of the Automotive Industry.

These clips show the vehicle in action. While the tractor unit steers around the first cone, the bogie remains straight. In the second slide, the tractor unit has straightened up for the next cone while the bogie is still steering around the first.

This smooth manoeuvre reduces the side forces on the load and keeps the vehicle within a narrow corridor.