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STRETCH MODE BEV

Axel Unger

Bertrandt Ingenieurbüro GmbH

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STRETCH MODE BEV

Initial situation:

In current electric vehicles, the high-voltage battery is conditioned immediately after the start of the journey at low outside temperatures or low cell temperature: The battery is heated.

The reason for this is that the battery cells can only deliver a limited current (current level) at low temperatures. As soon as the cells reach their "comfort zone", maximum power is available to the customer.

The heating of the cell happens regardless of whether the customer is driving a very short distance or a very long distance.

Disadvantage:

Especially for short distances (e.g. 1.5 km drive to the shops), the energy consumption of "heating the cell" has an exorbitant effect on the consumption of the electric vehicle. For the customer, this "extraordinary additional consumption" is often not comprehensible.

The efficiency of an electric vehicle is part of most vehicle tests in the press and social media. Vehicles are measured by their energy consumption and compared with each other. Due to the high efficiency of the electric drive, an additional consumption, by "heating the battery", has an immediate customer-visible effect on the overall consumption of the vehicle.

Solution:

The customer is given the choice via a suitable interface (touch, buttons, voice control, etc.) whether he wants to drive "short distance" with a significantly reduced available power, or whether he wants to drive "long distance" with the maximum vehicle power.

If the customer chooses "short distance", battery heating is suppressed. The vehicle's consumption is only increased by heating the interior. The reduced power and the deactivation of the battery heating can be communicated to the customer via a display.

Advantages:

The consumption of an electric vehicle is not transparent for the customer and often not comprehensible.

Due to the system-related high efficiency of an electric drive, incidental consumption has a much greater effect on the overall consumption than the customer knows from the combustion engine.

- If the customer selects "short distance", the vehicle's performance is reduced, but consumption remains low.
- This function communicates a direct benefit to the customer. He can save energy.
- The function creates a better understanding of how the electric vehicle works.

Technical implementation:

Shown below is a sketch for clarification:

