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ADAPTIVE SCENTING

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ADAPTIVE SCENTING

Technical task:

- Interior sensors detect the stimulus situation in the vehicle
- An algorithm interprets which fragrance components best match the current stimulus properties
- The scenting system optimizes the type of scent and the intensity of the scenting
- In an extension of the invention, the fragrance also adapts to learned, personal preferences of the driver and passengers.

Initial situation:

Scenting systems in the vehicle can scent the interior with different scents at the driver's request. Currently, the driver can choose between different scents (e.g. winter or summer scent). Also the intensity of the scenting can be selected in different levels. The perception of scents depends on the multi-sensory experience of the user. Thus, scents in combination with colors or sounds are perceived differently

Solution:

A system detects the multisensory stimulus situation in the vehicle and adapts the scent to that stimulus to provide the best sensory experience. The current stimulus situation includes:

- Olfactory stimuli: Sensors detect which odor is currently active in the vehicle. This can refer to the odours of the persons (e.g. perfumes) or other objects (e.g. food).
- Visual stimuli: Sensors detect what the dominant light mood in the vehicle is (e.g. reddish light, bluish light). Other visual influences such as the color of the occupants' clothing, ambient lighting, etc. are also detected.
- Auditory stimuli: Sensors detect whether there is a strong or weak background noise.

Based on this information, the system selects the best complementary scent. On the one hand, this should be selected in such a way that it is not perceived as disturbing in the context of the current stimulus backdrop. On the other hand, the selection should allow the AUDI scent experience to be maximized, since the scent fits seamlessly into the stimulus situation.

Advantages:

- Unique user experience
- Always positive experiences with fragrancing