HAPTIC (MotorSkins / IWS)

Morphing textiles surfaces for soft human-machine interfaces

The Project

We are developing the next generation of morphing textile surfaces for automotive suppliers and manufacturers.Currently, interfaces are predominantly visual. Screen overload can cause distractions and increase accidents. Design trend in car interiors towards more fabric and clean, lean interiors. Morphing textiles bring a high-tech feeling to a well-known and friendly material. State-of-the-art morphing textiles rely on a) integrated electronics for shape-changing alloys/ polymers that are energy hungry and produce heat, or b) mechanical „push"button systems (complex and heavy). MotorSkins fluid-driven actuation system is light, simple, and cost-efficient keeping the desired „wow" factor. Fraunhofer multi-layer, laser welding technology helps to: increase quality and resolution, offer more complex pneumatic systems and functions (tri-layer), and keep the welding seem „hidden).

The Team

Location: Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS Dresden

Members: Eric Pohl (IWS_ material definition), Benjamin Foster (IWS_process definition), Facundo Gutierrez (MS_ Industrial design), José Villatoro (material science)

AHEAD Infos

Batch: 2022 **Phase:** 1 **Track:** Spinoff

AHEAD

The Business Model

Unique Selling Proposition: Fabric systems for „shy technology" that can: move, appear and disappear, morph. Flexible, cost-efficient and scalable (roll-to-roll production)

Unfair Advantage: Possibility to tailor the technology to the specific needs of the client. Fast-paced integration. Laser welding does not require tooling, since has great development and production flexibility.

Revenue Model: Stage 1: service as R&D and tech-integration. Stage 2: licencing to tier 1 supplier.

Venture Readiness Level

VRL | Ideation | Incubation | Traction | Growth

Technology Readiness Level

TRL | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9

The Side Facts

Customer Focus: B2B

Searching For: Expert interview partner, investor, mentor

Industry Tags: Automotive & parts

Technology Tags: Mobility, robotics, user engagement