Yanfeng Automotive Interiors and KOSTAL present smart surfaces in 3D glass

Frankfurt, Germany – 12 September 2017. Yanfeng Automotive Interiors (YFAI), the global leader in automotive interiors, and KOSTAL, one of the world’s leading suppliers of mechatronic HMI components, are presenting at the IAA 2017 a global innovation relating to smart interior surfaces: the innovative Yanfeng-KOSTAL-Module (YaKoMo). The freely designable 3D glass surfaces seamlessly combined with new HMI technologies enables the implementation of innovative operating concepts for tomorrow's mobility for demanding designs.

Both companies share a vision: in the future every surface inside the vehicle can become a smart surface. The large decorative surfaces in the vehicle, including the door trim, floor console and instrument panel, will take on functions as smart interior surfaces. Whereas to date these surfaces have been mainly decorative, they now advance to become mechatronic user interfaces. In the strategic partnership, YFAI and KOSTAL combine their competencies relating to interiors and HMI to jointly develop and manufacture integrated smart surfaces.

In the module, modern interior design and high-quality, authentic 3D glass processing from YFAI meet innovative mechatronics and new HMI solutions from KOSTAL. YaKoMo represents the development of a new functional surface based on three-dimensional curved glass. This means that modern operating elements and switches can now be integrated even into larger decorative elements in 3D glass shaped surfaces to form an innovative, functional surface module. If no information is called up, the integrated screen and operating surfaces remain invisible as purely decorative glass surfaces. Thus the driver is not distracted by unnecessary information.
Newly discovered: 3D glass for designing vehicle interiors

YaKoMo is the first publicly presented joint development from the strategic partnership between YFAI and KOSTAL that started a year ago. “The 3D glass module combines our knowledge and experience as interior expert and market leader in automotive interiors with the mechatronics excellence of KOSTAL as a leading developer of innovative HMI solutions. We are delighted to be able to globally present YaKoMo including our innovative 3D glass shaping process at the IAA,” said Han Hendriks, Chief Technology Officer for YFAI.

3D real glass geometries as a smart user interface

A 12.3-inch convex screen is seamlessly integrated in the upper area of the 3D glass module. The use of 3D curved real glass surfaces enables the seamless, three-dimensional surface design. This innovative surface technology enables new levels of freedom in the integration of design and function and can be modified for various customer-specific requirements. Decorative surfaces merge with HMI functions and offer interior designers a variety of functions and forms. To date shaping large glass surfaces around any axis and the precise positioning of the relevant symbols using electronic functional elements is unique in vehicle technology. The 3D glass shaping process gives designers total freedom when designing the arrangement of switches and operating elements.

Innovative HMI for various interior designs

Various operating functions in the vehicle are seamlessly integrated and blend into the interior design. The smart functions rely on the innovative sensor and actuator technologies from KOSTAL. “Our capacitive sensor technology enables touch operation to be integrated into free form surfaces. In YaKoMo we combine that with active haptic feedback in order to achieve a completely intuitive operating experience,” said Jörg Schwerak, Vice President Research & Development for KOSTAL. The haptic feedback transfers (intuitive) principles already learned from classical switches, such as the haptic confirmation of the switching process, to the closed, sensory operating surface of YaKoMo. This helps the driver to keep their eyes on the...
road when driving. The technologies used in the module therefore also increase driving safety for manual and partially automated driving.

In addition to such new switching technologies as capacitive touch sensors, classical switches can also be seamlessly integrated. But that is not all: YaKoMo also enables operating elements to be used as appropriate for each brand in order to support the design language of each customer.

**Partnership as a driver of future innovations for smart interior surfaces**
The two companies present the first results of their strategic partnership at the IAA 2017 using a floor console as an example. The concept development, which is nearly production-ready, could already be used in the next generation of vehicles from model year 2021.

“The response from automakers to the cooperation between KOSTAL and YFAI has been very pleasing. Our customers however not only expect a top-quality integrated final product but also the whole service from a single source. This of course reduces the complexity on their side. We want to make the OEM’s decision to choose our combined range of smart interior surfaces as easy as possible,” explained Han Hendriks from YFAI and Jörg Schwerak from KOSTAL on behalf of both companies.

At the IAA 2017 the initial results of the YFAI-KOSTAL partnership will be presented at both the YFAI booth (Hall 5.1, B26) and that of KOSTAL (Hall 8.0, A01).

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About Yanfeng Automotive Interiors:
Yanfeng Automotive Interiors (YFAI) is the global leader in automotive interiors. YFAI is redefining how people relax, work and play in their vehicle interiors today and decades from now. Headquartered in Shanghai, the company has approximately 110 manufacturing plants and technical centers in 20 countries and more than 33,000 employees globally. They design, develop and manufacture interior components for all automakers. Established in 2015, Yanfeng Automotive Interiors is a joint venture between Yanfeng, one of the largest automotive suppliers in China and Adient, the global leader in automotive seating. For more information, please visit www.YFAI.com.

About KOSTAL:
The KOSTAL Group is an independent, family-owned company founded in 1912 and with its headquarters in Luedenscheid (Germany). The company develops and produces technologically sophisticated electronic, electromechanical and mechatronic products for important industrial companies. The KOSTAL Group has over 17,000 employees at 46 global locations in 21 countries on four continents working in the business areas of Automotive Electric Systems, Industrial Electronics, Connectors, Test Technology (SOMA) and Solar Electric. For more information, please visit www.kostal.com.