

## SmartEEs Success Stories



"Prototypen & Sonderlösungen" offers design achievements, developments and production of wood prototypes, products and materials. 3DMA is a wood composite, which has been specially developed to implement shielding, functional elements and electronic components into its original structure.

[www.3dma.de](http://www.3dma.de)



*Smart home control panel prototype*

### Problem to be solved

Integration of super thin, flexible electronics, including OLED, into super thin bent wood. It has the form of an HMI in the 3DMA wood structure: operable wood with information return as wood backlighting. The aim was to create touch-capable OLEDs that can be operated by the user through the outer surface of the wood, without shortening the lifetime, by means of an additional touch solution.

### Solution provided by SmartEEs

SmartEEs offered the development of a highly complex OLED matrix, which is well ahead of the current possibilities of OLED lighting design and manufacturing. Additional touch FPCBs are used to underline the value of the electronics with functional reliability. Lidar sensor technology is integrated for first interactions over a longer range, and creates the bridge from near-field interaction to spatial interaction. First application: trade fair mode for interaction with visitors > who are animated to want to operate the interface! The interface signals "Hello, here I am, touch me!".

### Business model & SmartEEs' impact

The prototypes produced will be used to show customers and partners what is possible with the 3DMA wood and how new areas of application can be opened up by combining modern technologies. The flexible electronics technologies represent a cornerstone in the business strategy development of Prototypen & Sonderlösungen that focuses on integrating disruptive technologies in its 3DMA product. With the help of the developed prototype, it has already been possible to address new interest groups, for example in aviation industry.

