



Sounds and pictures

► Light tags for augmented paper and packaging

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Paper has been with us for many thousands of years and has properties that we still value in the digital age. Rather than replacing paper with e-readers, this project aimed to connect paper to digital information – particularly sound.



Researchers at Surrey had already explored the possibilities of connecting paper to the web and developed an interactive newspaper that could be read with wireless headphones.

However, one of the challenges was in printing the required interactive zones and associated electronic components on the paper itself. Light tags, a new printed electronics technology, aim to provide a solution to this. Using a new technique for identifying hand and finger movements as the document is read, this research could

pave the way for a number of new commercial applications in the print and packaging industry.

The IAA project endeavoured to prove that the technology was feasible and to gather feedback from both end-users and industry representatives on practical uses and applications. To achieve this, Surrey's Advanced Technology Institute and the Digital World Research Centre worked in partnership with the Welsh Centre for Printing and Coating at Swansea University. Sample light

tags and two application demonstrators were developed and shown in focus groups. These included 'talking packaging' for furniture, which guides users through pictographic assembly instructions, and a glossy photobook which plays a soundscape for each page on a soundbar in the same room ([can be seen in action at vimeo.com/album/3430190](https://vimeo.com/album/3430190)).

The team has now filed a patent for the technology and won a new 'commercialisation to innovation' (ICURE) grant to investigate the market for augmented print and packaging.