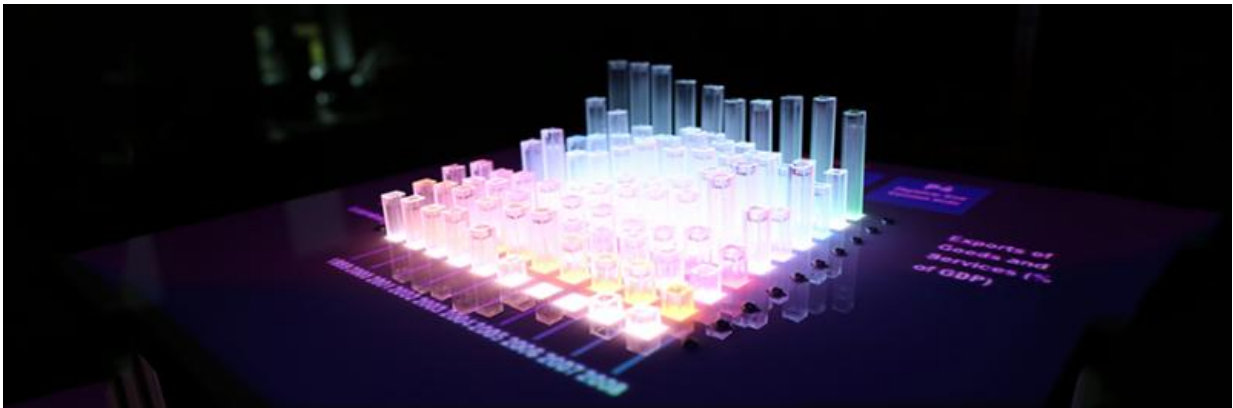


Shape changing display could spell the end for the 2D graph

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3D prototype display

Imagine your computer screen could change shape. Imagine if that screen could spring to life at the touch of a fingertip, translating numbers and trends into shapes and gradients you can reach out and touch.

Researchers have developed a 3D prototype display which brings data to life in just this way sounding the death knell for the two dimensional bar chart.

Human Computer Interaction specialists at Lancaster University have built a device which translates data into a three dimensional display. The interactive grid of 100 moving columns enables people to understand

and interpret data at a glance. People can also physically interact with data points by touching, selecting and swiping through them to hide, filter and compare sets of data easily.

The 3D display is radically different to interacting with data on a flat screen. A month's sales figures for example spring to life and take on a 'shape' in front of you, numbers become 'things', trends become gradients which you can reach out and touch.

Lancaster hosts a world-leading Human Computer Interaction research lab, developing the kind of shape changing displays which could one day make it into our homes, offices and perhaps even our mobile phones.

The group, led by Dr Jason Alexander, will present some of their work to one of the world's leading [human-computer interaction](#) conferences CHI 2015 in April.

Dr Alexander believes this type of technology, which enables people to quickly identify patterns and absorb large amounts of information, could bring about a step change for business and education.

But for these shape-changing displays to be effective, researchers and developers first need to understand how people interact with them. So the Lancaster team has been testing out their 21st century bar chart prototypes on the public.

Dr Alexander said: "Humans know how to explore, and interpret physical artefacts, we do it all day, every day. This tactile platform allows us to use those inherent skills to examine datasets normally confined to flat 2D displays.

"Our challenge was to produce a design that allows users to quickly comprehend large datasets while also offering them traditional graph-

based manipulations.

"For it to be useful we needed a device that people could easily navigate, compare data sets, organise, annotate and drill down into the fine detail."

The team now wants to take their prototype to the next level, making it smaller, lighter and with more 'bars' so devices like these could be installed in meeting room tables and in public areas to quickly and meaningfully convey [data](#)-driven information.

He said: "What would it be like if every pixel on your screen could move? Imagine the possibilities. Our lab works to develop new devices that merge the physical and digital worlds."

Provided by Lancaster University

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