Institute for Environmental Analytics

Turning environmental data into competitive advantage

flexibility

IEA work with organisations large and small, public and private, in a commercial time frame, to help you turn data into competitive advantage.

Our team of data and software experts are drawn from a wide range of disciplines including climate science, engineering, geo-mapping, astrophysics, mathematics and satellite data. We have the breadth and depth in the skills you need to visualise existing data sources, analyse historic trends and develop predictive analytics tools.

Institute for Environment Analytics, Reading.

"Logistics of getting the glass and screen into the room required some serious organisation. "

Jon Blower, CTO.

C A S E S T U D Y

Challenge

To provide an interactive screen so different sources of information could be displayed graphically, synchronised and amalgamated to achieve a better understanding of the earth's atmosphere. Core source of information was from the University of Reading's Meteorology department archives plus many other source feeds were provided from across the global. There was a need to 'show and tell' so the screen could interact with other universities and scientists from remote locations.

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Strategy

Firstly, Harp had to understand what the sources of data were and how they were presented. Once these were known then a solution could be devised. The current room had two projectors shone onto a plain white wall. Thus, only two sources could be seen at any one time. The earth's atmosphere having many layers up to 16 layers would need to be seen simultaneously to observe any interaction so further research could be conducted.

Solution

The solution was to provide a touch screen large enough to fill the room so that as much information could be shown at any one time. What fitted the bill was a 4 by 2 46" LCD video wall which could take 16 feeds in and displayed in 'picture in picture' windows. This allowed resizing and positioning of the windows to allow source information to viewed side by side. In addition, a video conferencing system was incorporated so that scientists from all over the world could see and comment on the information displayed.

To bring all the information together the whole of the screen was covered with a touch panel where up to 32 individual touches could be achieved. Thus, allowing multiple users to interact with the data images so that information could be compared and contrasted.

Results

The biggest problem was that the room for the video wall was on the first floor of the building. The glass size was 4.1m by 1.07m thus would not go through the internal of the building. A window had to be removed and the glass section of the video wall had to craned in. Once in the rest of the frame was assembled and the screen fitted. Processing for the video wall was housed remotely as the power required to drive the graphics cards was large enough to have noisy cooling fans that would disturb any meeting the room.

A video wall that was a single contiguous touch screen where the scientists could come with their memory sticks and plug directly into the video wall to show their piece of information and compare with the departments archive or previously down loaded information. The department has now become a centre of excellence for the Institute of Environmental Analytics.

Full video demonstration can be seen at https://www.youtube.com/watch?v=vOFOxMTKSTY

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