FLIR

APLITER TERMOGRAFIA

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Thermal imaging showcases a colourful approach to learning at Scitech in Western Australia

scitech

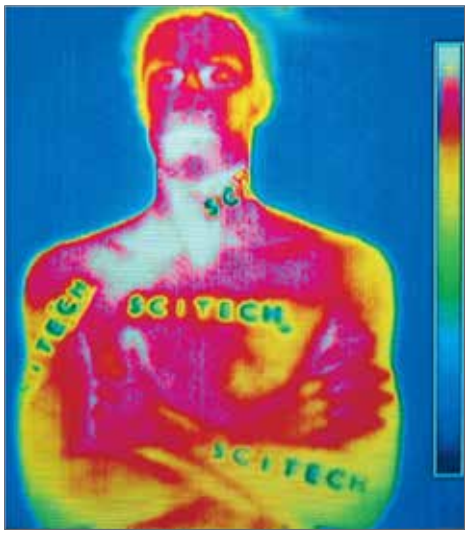
Scitech is an award-winning, hands-on science centre based in Perth. As Western Australia's leading science education centre it offers engaging and interactive science experiences for visitors of all ages. Scitech presents exhibitions, programs and services that are designed to increase interest and participation in science and technology. Through over 100 hands-on, captivating exhibits and by encouraging visitors to touch, twist, turn, question and explore, Scitech makes science an inspiring and exciting experience.

Since opening its doors in 1988, Scitech has grown from a small Perth attraction to Western Australia's leading science communication provider. Scitech is always looking for fascinating new ways to actively engage people in science and technology, and its exhibits, shows, programs and exhibitions are constantly changing in line with the latest innovations, meaning no two visits are ever the same.

Scitech was the first Australian science centre to produce its own large scale exhibitions and Scitech continues to design and build most of its exhibits on site. As a not-for-profit organisation, funding for Scitech comes mostly from generous government grants, corporate partnerships and admission and membership fees.

Each year, around 300,000 visitors come through the centre based in West Perth, while Scitech's travelling science programs, known as Outreach, deliver a wide variety of practical science workshops, lessons and activities to more than 190,000 people in regional and remote Western Australia.

Scitech also has an extensive touring program that visits every regional and remote community across Western Australia. These hugely popular Outreach programs deliver science shows and experiments to eager school and community audiences. Teachers also benefit from Scitech's Professional Learning team, which offers development and support programs.



Visitors get to see a real-time thermal plot of the body leading them to think not only about the technology but also about how their bodies work.

"Scitech's Outreach program travels all over Western Australia, from Esperance, 728km south of Perth, to Broome, 2,239km north of Perth", states Outreach Manager Kimiko Holder. "In a three week tour, the presenters and exhibits can travel up to – and sometimes

Accompanying the exhibit are a hot and a cold panel. Visitors place their hands on either panel to see via the infrared camera how their body temperature is affected.

over – 4,000km. With around 20 scheduled tours and over 30 regional events occurring each year the team covers a lot of ground!" Kimiko concluded.

With a nose for fascinating technologies and the knowledge of thermography cameras being incorporated in other science centres, Scitech set out to obtain a camera for its centre. In 2006 it bought a Thermovision A40V composite camera with a 45 degree field of view lens for an exhibit known as "The Infrared Wall". This exhibit was part of a "Patterns of Life" exhibition gallery which offered visitors a range of interactive exhibits using images, colour, lighting and sounds.

"We chose a FLIR Systems camera because FLIR offered a local supplier and support", said Denham Dunstall, Scitech's Director of Technology Design and Development, "and the equipment met our specific requirements."

Scitech develops all its exhibits with an aim to show visitors how a range of science and technology concepts work in domestic and industrial environments. The infrared thermography exhibit demonstrates the application of the same real-life technology that is used in police surveillance, fire-fighting, medical imaging and diagnosis, pollution detection, power line maintenance and to detect problems with insulation in buildings. Infrared thermography was an area of technology needing a hands-on demonstration of its real-life application to visitors. It also gave visitors an opportunity to see how this form of technology was developed to present a visual representation of something that we can all feel but not actually see.

"A unique feature of this exhibit," states Denham, "is that the infrared real-time images of visitors are projected life-size on a 3 by 2 metre screen. It was for this reason that we chose the wide-angle lens for the A40V as it allows for a shorter distance between the camera and screen, thereby reducing the exhibit footprint in the gallery.

"The A40V also met our needs as it "remembers" settings when de-powered which is important in an exhibit where the unit is not operated manually by a trained operator."

Accompanying the exhibit are two hot and cold panels so visitors can place their hands on either panel to see via the infrared camera how their body temperature is affected. Hot areas of the body are shown as red or white, mid-range temperatures as green or blue, and cool areas as purple or black.

"The beauty of the exhibit," says Denham "is how it offers a simple explanation to a complex technology. It also allows a full-body interaction by the visitor and is particularly interesting for children and their parents to use at the same time as body temperatures can be distributed very differently according to age."

This exhibit proved to be so popular and relevant that it was kept on the floor after the "Patterns of Life" gallery was replaced in March 2009; and in November 2009, Scitech invested in another infrared camera, the FLIR B200, for its Outreach science program, so the same hands-on experience could be taken on the road around Western Australia. This FLIR B200 camera was incorporated into a smaller portable exhibit and uses a video monitor to project visitors' images.

"The B200 was chosen for its price and portability – being used in our travelling Outreach program" added Denham.

"The thermal imaging exhibits are eye-catching, 'full-body' and exciting and create an opportunity for our staff to open up discussion about the application of modern technology with our visitors", says Denham. "The visitor gains a unique experience when using the thermal cameras – it's not everywhere you get to see a thermal plot of your own body! They get to think a bit more about not only technology, but how their bodies work and also the world around them.

"Both the A40V and the FLIR B200 have proven to be easy to use and meet our requirements well. We have been very happy with the service we have received from FLIR and its representative Steve Blott", concluded Denham.

The exhibit proved so popular a FLIR B200 camera was purchased to take a smaller portable exhibit on the road.

For more information about thermal imaging cameras or about this application, please contact:

FLIR Commercial Systems
Luxemburgstraat 2
2321 Meer
Belgium
Tel. : +32 (0) 3665 5100
Fax : +32 (0) 3303 5624
e-mail: flir@flir.com

T820493 {EN_AUS}_A