

***Robot Thought* venue 2: Bristol/Thinktank**

Successes, challenges and recommendations

This document summarises the successes and challenges in developing, delivering and evaluating the *Robotic Thought* show, from the perspectives of the project partners. The show was developed following collaboration between the Bristol Robotics Laboratory and Thinktank science centre in Birmingham, as part of the *Robot Thought* project funded by EPSRC and coordinated by the Graphic Science Unit at UWE, Bristol. The results from the audience evaluation are provided in a separate document.

Successes

Thinktank staff and the Bristol Robotics Lab link scientist identified a large number of successes associated with the project:

The shows

- Overall, over 4000 visitors participated in activities (although there may be some double-counting).
- 51 shows were performed, reaching approximately 3300 people.
- Additional events included robot-related storytelling and Legolab activities. Two Meet the Scientist events and an evening lecture were also delivered.
- Thinktank run three four-month themed programmes per year. Robots was the theme for October-January 2006/7.
- The Robotic Thought show was well-received by audiences. The name of the show was also attractive: normally, around 10% of Thinktank visitors see the show. During the Robotic Thought run this figure sometimes reached 50%.
- The show had 'something for everyone'. As well as robots being an engaging theme, it was fun and thought provoking with real science, discussion and demonstrations.
- Having a prototype script to act as a starting point was useful, especially because the pilot script related to intelligent robotics (the research focus of the partner robotics lab), therefore the amount of editing required was limited.
- The combination of the show and the Meet the Scientist event worked very well. The informal discussions allowed the ideas introduced in the show to be explored in greater depth by children and adults (several adults were observed to take over questioning the roboticist from their children!) The roboticist was asked a range of questions, including questions about the career route into robotics.
- The evening lecture was very well received.

Project structure and coordination

- Thinktank don't normally involve scientists in the development of their programmes, so *Robot Thought* was a good opportunity. The roboticists' input was really useful for background information and anecdotes, and meant that the presenters felt equipped to answer audience questions at the end of the show.
- From the perspective of Thinktank, *Robot Thought* enriched rather than completely changed the way the show was developed, in that the process was very similar but with extra support. It was clear to the Thinktank team that the project had been devised with a good understanding of how science centres work, and this made the process straightforward.

- The initial visit to the robotics lab was seen in a very positive light: it helped inspire the team as well as providing some science input.
- The show was developed at a time of staff changeover at Thinktank. This meant that help from Graphic Science in developing the script was very welcome!
- Thinktank did not use all of the support days offered, but felt they used the right amount and the support they received was useful.

Challenges

Although, overall, this stage of the project was felt to be a success, there were some challenges along the way.

- Staff change within Thinktank meant that not all of the trained presenters were able to deliver the show. In the end, four presenters were trained, and two delivered the show.
- With the notable exception of the day that the project roboticist attended, the Meet the Scientist events did not work well. Thinktank engaged local robotics researchers who then let them down. It was noted that the success of these events depends heavily on the personality and experience of the scientist involved. It is not realistic for Thinktank to supervise/train every scientist.
- The project roboticist was prepared to attend another day which could have helped with the Meet the Scientist events. The distance between the robotics lab and science centre was a barrier here – Thinktank felt it was a long way to ask someone to travel, especially at short notice after the local roboticists had cancelled.
- An interesting issue about the role of the roboticist in the show was raised. The audience feedback showed a mixed response to this element of the show. It was felt that the input added credibility, but the roboticist said he felt it needed more work to fit in smoothly with the rest of the show. It would have helped to have rehearsed the live section prior to the show to ensure it was brief and clear, but this was difficult due to timing for the roboticist and staff illness at Thinktank.
- One challenge with the show was that it was difficult to recruit volunteers, especially adult volunteers on days with a small audience.
- Another challenge was in adapting the show to different venues: on a few occasions the show was delivered in Thinktank’s classroom space. This was not a major problem, but did require some adjustments.
- Using the electronic voting at the end of the show for evaluation detracted somewhat from the audience experience. This limited the amount of data that could be collected in this way.
- Using three different questionnaires (due to a misunderstanding) made analysing the audience survey data difficult.

Recommendations

1. **Where possible, the project robotics group should be the ones to collaborate on events such as Meet the Scientist**, as they have already committed to the project. This may help avoid last-minute cancellations. If, after the number of days and activities have been agreed, extra input is required then extra input from local research groups can be sought. Perhaps science centres looking for further input could be pointed towards groups involved in programmes such as the Walking with Robots network.

2. The roboticist/s and presenters should, where possible, make time to **rehearse (and possibly script) the live roboticist section**. This will ensure that it adds value to the performances.
3. If it is to be used again, **electronic voting evaluation should be given more thought**. If a voting system is available, a way to collect evaluation data could be designed into the show from the start, rather than added to the end of an existing show.