

## Creating a Cosmic Experience

### *The Future of Full Dome Technology in Museums and Attractions*

*By Bert Knorr*

I think that Canadian Museum of Hindu Civilization's *Cosmic Theatre Experience* serves as an excellent case study for the future of Full Dome in museums and attractions.

For years, the Museum wanted to create an exhibition with the title: *The Cosmic Theatre*. It was not until 2007, however, that we began work on the project in earnest, deciding that the exhibition was going to be about:

1. The beginning and the history of the universe;
2. The connection between humans and everything else in the universe;
3. The compatibility between the Vedic teachings from thousands of years ago and modern science, especially quantum physics; and
4. That the universe we live in is a wonderful and mysterious place where the basis of existence is not matter, but energy

These ideas, specifically universal interconnection, have long since been a part of the museum's epistemology. The directors of the museum prescribe to an understanding of Hindu philosophy that recognizes that human beings and the wider universe are closely interconnected. As such, we wanted to incorporate these themes into the *Cosmic Theatre Experience*. As the exhibit designer, however, these themes present a great challenge as the task is to make some very complex abstract ideas visible and comprehensible. Since our goal was for each visitor to be able to connect with the material – regardless of cultural background, gender or age – it was clear from the beginning that we needed some cutting edge, high tech equipment to get everybody's attention, and some effective low tech exhibit techniques to make the content really resonate with the visitor.

Given our goals and the nature of the material that we were working with, a dome felt like the most natural means of presenting our ideas about the universe. A dome was appealing because it is able to encompass the viewer, creating an experience that is fundamentally different from a standard two-dimensional screen. At the time, however, I was only familiar with planetariums and since I felt that sequences of a starry sky could not do justice to our complex themes, I wanted to learn exactly what domes could do. My discovery of full dome technology was encouraging; that domes could project live action films was a welcome surprise. However, as the technology regarding live action films was still limited, I knew that executing the film would be a challenge. Nevertheless, we forged ahead.

Dome film production has come a long way since we began planning for the *Cosmic Theatre*; at the time, we felt that producing a live-action dome film was a risk. With little precedent of non-Planetarium dome theatres in museums, we did not know if we could a) create a successful film, and b) if the technology would help to engage our visitors with our ideas. Once we had purchased the dome and started to work on the film, the dome quickly became the centre of our exhibition. In short, we went from creating an exhibition with a dome to creating a dome with an exhibition.

The dome is currently the museum's leading technology. It is a 24' Spitz NanoSeam dome with custom seating and a top quality projection and sound system. The dome seats 18 adults, and if we put gym mats on the floor, can accommodate an additional 15 children. Our film, the *Cosmic Dance*, is 45 minutes long. It tells the story of Leela, a young physics student who is just beginning to discover some of the many ways that Hinduism tells the story of modern science. In the film, we follow Leela from the University of Toronto to India, where she discovers the 'cosmic dance' of the universe. The story is punctuated with interviews with scientists and a swami. Among the scholars interviewed are professor Dr. Hans Peter Duerr, Archana Sharma, PhD, Douglas Cardinal, architect, modern Shaman and swami Veda Bharati.

Since the film's content is quite dense, it is accompanied by an introductory and concluding exhibition that presents the visitor with the film's more probing questions and propositions. In addition to floor to ceiling graphics (the entrance door to the dome is part of a large graphic, it is nice to see the surprise of the visitors when they discover the dome behind this image) we use a gesture directed projection system and video screens in the introduction and exit areas. In short, our exhibition has all the components of a good speech:

1. You tell them what you are going to tell them: the introduction exhibit
2. You tell them: the *Cosmic Dance*
3. You tell them what you told them: the exit exhibition.

*The Cosmic Theatre Experience* has turned out to be a powerful exhibition and a great success; I believe that the use of the dome has played a major part in this. The great thing is that Full Dome is even more immersive than IMAX and a lot more affordable; this makes Full Dome possible for one specific project, small museums, and when using an inflatable dome even travelling exhibits. We tested the response to the Cosmic Theatre with groups of visitors including students, teachers and museum specialists and we received an enthusiastic response from a wide range of people from all age groups. Even small children were able to engage with the film's most sophisticated content.

The benefits of the *Cosmic Theatre Experience* for the museum and the community at large are substantial. The addition of the *Cosmic Theatre Experience* to the existing exhibitions in the Museum has made it an exciting destination for museum-goers from all walks of life. Moreover, by constructing the only Full Dome in Toronto (and possibly Ontario) we have given the city a new, dynamic place for teaching and learning.

In closing, my experience with the *Cosmic Theatre Experience* leaves me confident that when we choose Full Dome for the Cosmic Theater we made the right decision. The research, the design and the production of the exhibition and the film made for some inspiring work and a great learning experience. It is rewarding to see, that at its completion, the exhibition not only meets but actually exceeds my expectations. In short, my experience with the Museum and my participation at the FULLDOMEFFESTIVAL 2010 in Jena, Germany, has convinced me that there is a great future for this medium in the museum world.

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