

# **THE MONTY PYTHON, BARNUM AND BAILEY, SUPER DELUXE PLANETARIUM OF THE FUTURE**

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What is a planetarium? It depends on who you ask. To some, it's a place to grow plants; to others, a place to take a nap; to others, a good place to pick up Trekkers. And to some – increasingly school and museum administrators, to hear the talk – it's a dinosaur. Now dinosaurs were very impressive creatures and they hung around for a long time. But they're famous today largely because they're all gone.

Have we, too, become too specialized, too much behind the times, no longer able to cope with our environment? Today we face a universe of shrinking resources and increasing competition for the education and leisure “dollar.” We face \$200 million dollar movies, reprioritization of school budgets, the IMAXimization of museums, the rise of virtual reality arcades, and a variety of other challenges. Can we adapt to these challenges – or is there a big, fat asteroid coming?

“Nothing endures but change,” wrote Heraclitus the Greek. “The times they are a-changing,” paraphrased Bob Dylan two millennia later. By now, the message is pretty clear. Will planetariums change with the ever-changing times? Should they? Can they? Do we really have any choice?

And if change we must, what will we become? Based on current trends and a rather large bottle of bourbon, I'd like to offer, for your consideration, one vision of the planetarium of the 21st century. Attend . . .

A large city, somewhere on Earth; call it Megalopolis. It has a planetarium – located in a theme park called “Future FunWorld” complete with Disneyesque attractions, a roller coaster that pulls from four gees to microgravity, a shopping arcade with moving sidewalks, and a four-acre food court.

But the planetarium isn't called a planetarium. It's a CyberDome. More specifically, it's the Acme Tool & Die and Insurance Company, Black Gum Chewing Tobacco, Missy's Clothing Delicates CyberDome – because corporate sponsorship is now the norm to pay for such facilities.

As we enter the “AT&D&IC/BGCT/MCD CyberDome,” we find that the proprietors have at last allowed that all seats are not equal. You can buy a first-class ticket for the prime center-rear seats, or second-class for the next best. “Steerage” gets you front or perimeter. Above the door, where in the past we might find such mottos as “Ad Astra Per Aspera,” we find the new battle cry of the age: “And now for something completely different: the greatest show off-Earth.” Spectacle with a twist.

Inside, the dome is tilted, stretching forty meters over tiers of seats. There is no planetarium projector or control console; only a brightly-garbed, fresh-faced theater attendant carrying a small box with a single large green button that says “Go.” Advertisements scroll across the dome, and we make a note to check on our insurance coverage and our supplies of chewing tobacco and clothing delicacies.

Being on a planetarian’s salary, we head for steerage. The seats are plush swiveling mini-recliners, complete with motion discomfort bag and cup holder – for refreshments are served here. We stuff our beer and popcorn into the chair caddy alongside and examine the wireless interactive remote chained to the armrest. The remote will allow us to vote, manipulate imagery, make international phone calls, and balance our bank accounts. Adrenaline starts to pump; we haven't balanced our bank account in weeks!

The audience files in, we fasten our seat belts, the button-pusher says “hi” – and pushes the button. The house lights dim, we don our 3-D holographic goggles, and deep in the bowels of the facility, the latest advance in AV computerized theater technology rouses. “Deep Show” initiates itself; circuits click, fiber optics hum, and zillion-megabyte data bases race at the speed of light up to two identical sets of high-end, light-enhanced, laser-based projectors – one set to display full-dome, full-color, fully interactive, virtual reality environments, the other set to project full-dome, high-definition, digital video, all rear-projected.

We begin with crickets and the summer Milky Way arching above; the constellation Sagittarius is delicately traced in the sky. Then the warp drive kicks in and we are whisked in a sleek spaceship toward the heart of the galaxy. A warning bell sounds; a collision with a star is imminent! We grab our remotes to steer the ship aside – and the law of averages being what it is, we all cancel each other out and plow right into the star to the merriment of all. There are subplots to thrill every segment of the audience: ship-board love triangles, a warp core breach, attacks by alien raiders, small furry animals in danger. Too quickly we reach the galactic core, where a super-massive black hole whirls in space in front of our faces; we reach out for it and burn our fingertips, just a bit.

Then the ship dissolves away and we plunge into the accretion disk; our chairs shake, our bodies buffeted by blasts of hot air and sprays of water. We are sucked down into the gaping maw of the black hole – in alternating darkness

and exploding lights, our chairs bucking wildly. Then in a flash of dazzling light we've popped back out and there's the blue Earth, dead ahead. We scream toward the surface; now we can see Megalopolis, then FunWorld, and the CyberDome, and drop back into the theater with a thud.

The lights come up, the button-pusher says "bye," the doors open automatically. As we leave, we pick up a grab-bag of corporate samples and an card on next month's show: "Mississippi Jones and the Quasar of Doom." We wobble into the light, with time enough for the roller coaster, a bit of shopping, and the food court. All in all, a satisfying day at the old planet – er – CyberDome. On the way out, somebody asks what a black hole is.

Now, this future scenario is: a) sublime; b) ridiculous; c) cynical; d) all of the above. The correct answer, of course, is d. But are there tiny kernels of truth here? Could this really be our future?

Planetariums today do many worthy things: we reveal the glories of the universe and the process of science, we satisfy curriculum goals and help people find their way around the sky. We provide a scratch where it itches for those who still find wonder in the night. But is this enough to keep us going? Do we opt for our traditional strengths or hop on the techno-dazzle bandwagon – and can we succeed in the future at either?

George Reed has said that "technology will never replace the awe engendered by the view of the night sky," and that we need to take advantage of our unique strengths in simulating that sky. Bill Gutsch has said, "Now we're getting the technology that can make the universe as exciting as it really is" and that we should use it. Some say live interactive programming is the way to go; others say it's multimedia presentations. And so on – as many suggestions as there are planetarians.

And you know what? They're all right!

There are, in fact, probably as many answers as there are planetariums, for as in the natural world, survival and relevance will depend on how well we adapt each to our own changing environments. We have traditional strengths to exploit, but we also have the capacity to be flexible--and we will need this skill to avoid the asteroid. It's all going to be about fitting in.

My staff and I get lots of practice at this, for our planetarium is part of a museum whose mission is to interpret the natural and cultural history of the Northern Rocky Mountains. We do all of the usual things, of course, from school programs and laser shows to classes and star parties, but we recognize the importance of conforming to the museum's mission. And so we position ourselves as the museum's "picture frame," providing a cosmic context in which to consider the Earth in the museum's exhibits and programs.

To reflect this position, we've curated an exhibit area in front of the planetarium which includes a mural of the evolution of the universe and interactive touch-screen computer stations which include both astronomy and museum information. We've produced companion programs for exhibits on dinosaurs and the geology and biology of the early Earth. We've also developed space exhibits which naturally include a planetarium component.

We support the museum's politically important outreach program by assisting with Starlab programming and developing traveling telescope trunks for rural areas. We develop astronomy programs and teacher workshops for the museum's paleontology field schools, and have started and nurtured a local astronomy club to provide a base of community support. We also fashion important collaborations with our university in grant-funded projects—most recently to develop a program on the sun in concert with the university's solar physics researchers.

We're experimenting with short, high-energy shows in the summertime to attract more of our time-conscious summer museum visitors. We've also created the museum's new multimedia orientation show – because we were recognized as having the on-staff expertise to do so.

Of course, none of this guarantees our survival. But we've found that in order to get support, you've got to give support, and we think our efforts have improved our chances to flourish a while longer in our particular niche.

A few years back, I made an informal survey of colleagues as part of an article on the future of planetariums, and found five common threads that I think are good advice for any planetarium:

- 1) Become your own best advocate**
- 2) Be relevant to your audiences**
- 3) Develop partnerships with others**
- 4) Keep up with technologies**
- 5) Diversify your portfolio**

In other words, be adaptable; find your niche and fill it! There are no guarantees for survival, but we need to take every chance we can get.

We must also realize that as we stand at the threshold of a new century, we may also be standing at the threshold of the speciation of planetariums. We've always been a diverse bunch, and I think this will only increase as some places evolve in the direction of Disneyland-under-the-dome, others maintain niches as purveyors of innovative education, and others land somewhere in between.

However we change, I think we would do well to emulate not the dinosaur – big and impressive and dead – but rather the lowly cockroach. Lean, mean, and supremely adaptable, it was around long before the dinosaurs and will probably outlast us as well. We could take a lesson here.

I think we must also remember what Alphonse Karr once said: *“Plus ca change, plus c'est la meme chose”* – “The more things change, the more they stay the same.” No matter how things may change, the universe will still strike some deep, unanswered chord in people as it has since the beginning of time; they will still be moved to wonder by the night sky, will have questions--and will need answers. That may still be our ticket to the future.

Storyteller Lynn Moroney once told me in her best Oklahoma drawl: “Ain’t nobody don't like a good story – and ain’t nobody don't like the stars.” If we show people the universe, tell a good story, and stay light on our feet, we may yet accompany the cockroach into the 21st century in this wild, wonderful, unpredictable cosmos!

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