

Written Testimony
Deborah Adler Myers
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Chairwoman Giffords and other distinguished members of the Subcommittee on Space and Aeronautics, thank you for your invitation to testify today on this important topic. I'm proud to represent Discovery Communications and discuss our efforts to further the excitement and endless possibilities of science in general, and space in particular.

Discovery is the brainchild of John Hendricks, who, in 1985, believed that Americans would watch a network devoted entirely to documentary and non-fiction programming that captures people's innate sense of curiosity of the world. He was personally inspired by a lifelong fascination and love of space – he grew up in Huntsville, Alabama, home of NASA's George C. Marshall Space Flight Center, watching in awe as man achieved the impossible.

Today, Discovery Communications, and especially the team I'm proud to lead as General Manager of Science Channel, is rallying around the call to action issued by President Obama on April 27th. He challenged our nation to restore science to its rightful place because science is more essential for our prosperity, our security, our health, our environment, and our quality of life than it has ever been before.

That call to action was music to our ears. For the last year, we have been working on a four-part strategy to get people of all ages excited about the sciences - especially space and its related fields.

The strategy includes:

- 1) Experimenting with various ways to make science exciting and entertaining;
- 2) Finding and training strong science communicators including the "rock stars" of science and pop culture and training a new generation of science communicators;
- 3) Aggregating science by bringing together traditionally siloed organizations to create partnerships and exchange information;
- 4) Delivering all of this content and information in a way that allows adults and kids to access it – on air, online, in gaming, on phones and digital devices not yet created and, in schools.

The ability to connect our science programming on all these platforms is what we call Science 360°. I'll go into each of these in a little more depth.

The first part of this strategy is to reinvent how we talk about the field and make it entertaining. There is a barrier simply in the word “science” – many of us struggled with science classes as children, and in fact, studies show scientific engagement among students dips in middle school. The cliché we struggle against is that science is boring and dry and something I might not understand. The key to bringing it to a larger audience is sharing the great stories and creativity of science. We want to ignite the public’s imagination, engage them in the quest for answers, and encourage them to embark on journeys to solve scientific puzzles. We bring science to life by making it relevant to people’s everyday lives, celebrating the ingenuity in all of us.

Science Channel’s mission is to be the creative magnet for all people – adults and kids who share a passion for innovation and the sciences – from space, technology and engineering to physics and the earth and natural sciences. Our job is to keep experimenting to find the best, most creative ways to bring these genres, stories and challenges to life by entertaining and inspiring. We believe that if you capture people’s imaginations, they will connect and engage.

The second part of the strategy is finding and training strong science communicators, those who have a gift for making science accessible and relatable. They make the hard stuff easy to understand and have an enthusiasm for getting people engaged. They are our hosts and experts - the rock stars of science, like Jim Garvin, chief scientist at NASA Goddard who participates in many of our space programs; Dr. Michio Kaku, co-creator of String Theory who explains black holes, time and the physics of the universe; and Dr. Basil Singer who takes us on space adventures. Sometimes they share their stories in short-form segments like our Brains of Science Campaign, which features people from all the sciences talking about their work and why they entered their chosen field. It’s a great way to get people excited about different careers in science.

To bring an even larger audience to the Science Channel, we seek out “A-list” celebrities who have a passion for science and space and want to share that passion with an audience and particularly kids. Whoopi Goldberg, who is passionate about inspiring a love of science in women and young girls, is doing a trivia-based game show and a companion online game that can be played simultaneously at home. We’re also working with Morgan Freeman, who has a love of space, and Will Smith, who was accepted to MIT before he decided to pursue his acting career. Celebrities are just one of the ways we bring new audiences to our networks. We entice new viewers with credible, enthusiastic celebrities and hold their attention with the entertaining information we present.

In addition to the current superstars of science and Hollywood celebrities, Science Channel is actively seeking out and training new science personalities. We created a science talent school where we take rising stars in the major fields of science, including Dr. Jennifer Eigenbrode from NASA and Dr. Hakeem Oluseyi from the Florida Institute of Technology, and groom them to be science television communicators. We will then use them throughout our programming and in some instances create series or specials around their area of expertise. Currently we are training 10 people a year and we hope to expand the program.

The third part of our strategy is partnerships, which are critically important to our success. Half of our battle is keeping track of all the amazing work going on around the world so we can bring our audience breakthroughs and innovations in all fields of science. Reaching out to science organizations that have been individual silos and working to bring them together and share their work with the public is a big priority for us. We work with research centers, universities, science media, scientists and leading organizations – anyone who wants the public to understand and celebrate their work. Our partnership with NASA is an example of a success story.

We came to NASA with a big idea. Academy Award-winning actor Morgan Freeman has a lifelong passion for space. He's fascinated by the great mysteries of the universe and trying to find answers to questions that have been asked for all of civilization, like: Is there other life in the universe? How did we get here? Is time travel possible? We wanted to bring Mr. Freeman's passion for the topic to our audience and asked NASA if they would host us for a day-long brainstorm about their current research and planned missions. They discussed with us the profound implications of what their upcoming missions could tell us about our world and ourselves. The result of that conversation is an eight-part series we're launching in April hosted and executive produced by Morgan Freeman.

NASA also played a critical role in our Discovery Education 3M Young Scientist Challenge, an annual competition for middle school students designed to inspire the next generation of great science communicators. The finals of last year's competition were held at NASA Goddard Space Flight Center. The inspiration our students felt when they worked for several days inside NASA alongside working scientists will forever change their lives. The event was also filmed by Science Channel for a television special, executive produced by Overbrook Entertainment, which aired earlier this year.

Science Channel also had the privilege of partnering with NASA to film their amazing achievements and then bring them to the viewer at home. Together we created two live television specials in the past year, tied to their Mars and Hubble missions. In addition to traditional televised programs, these specials also spoke to audiences in media formats that they prefer, with extensive websites that allowed people to explore at their own pace and new media tools, including NASA scientists posting Twitter updates and answering viewers' questions in real time as the actual missions unfolded. We also aired short-form content throughout the day with mission updates.

Space is one of many genres that we program on Science Channel, and our viewers tell us that it is one of their favorite subjects. Beyond our anecdotal evidence, our ratings research confirms that our viewers love this genre – last quarter, space programming rated 25% higher than our network average. Our television shows cover a wide range of space and exploration topics – from space travel to string theory and wormholes to black holes. We start from the Big Bang beginning and go right to the edge of what we know is possible in the future. We've brought back classics like *COSMOS* and created our own original series like *When We Left Earth* and *Meteorite Men*.

When we decrease our space coverage we hear about it immediately from our viewers, so space-related topics and segments are also woven into many other series and specials. In fact, so many people crave space programming that we devote an entire week of our evening television schedule to our annual Space Week, which rates highly on air, and online. We launched a new series during *Space Week* this year called *Exodus Earth*, where we explored what would happen if for whatever reason we decided to leave earth. The series looked at where would we go, how would we live and what would be waiting for us. At Science Channel we constantly experiment with different kinds of storytelling devices to bring topics to life.

We're also bringing our content to teachers and students. Reaching tomorrow's scientists today is critical, so Discovery Communications' Education Division, which combines scientifically proven, standards-based digital media and a dynamic user community to empower teachers to improve student achievement, has created services to engage students in scientific inquiry.

Utilizing America's broadband network, Discovery Education *streaming*, Discovery's flagship service, offers American classrooms thousands of science videos, delivered via the internet, correlated to state standards, and in 3-5 minute clips that teachers can easily integrate into their classroom lessons. In addition, Discovery Education also produces specific digital content services for both elementary and middle school classrooms, called Discovery Education Science, which propels school curricula with standards-based digital content, virtual labs, simulations, and more. Together, these services help educators encourage exploration, stimulate critical thinking, and deepen understanding of science.

While the promise of digital content to positively impact student engagement in science is great, any plan to integrate digital content or other educational technologies into classroom curriculum is doomed to failure without ongoing professional development, supported by school districts. Discovery Education works directly with school districts to provide professional development strategies that model best practices: namely, strategies for providing students with consistent feedback, utilizing cooperative learning structures, embedding digital content into instruction, and promoting the creation of content for the Web in an effort to better engage 21st century students in science instruction.

Advisory board

Underpinning all that I've discussed here today is the world-class board of advisors led by our chairman John Hendricks. Members include representatives from the Massachusetts Institute of Technology, the National Science Teachers Association, the Florida Institute of Technology, Hudson Alpha Institute for Biotechnology, The Franklin Institute, National Academy of Sciences, Electronic Arts, Popular Science, and, of course, NASA. Our advisors play a critical role in making sure we know about amazing research and technologies. They help us find new science communicators. They assist us

with developing programming and they help us shape our efforts to do even more in the areas of science literacy and education.

In conclusion, I want to express my sincere thanks for allowing Science Channel and Discovery Communications to show you our passion for space and all genres of science. I think our audience loves space programming because it's a quest to discover the great mysteries of our time. It allows people to dream, to think outside themselves, to wonder about what else there is in the universe and to marvel at the beauty and fragility of the world in which we live.

Science isn't just something you learn in school - it's alive, it's optimistic, it's the future. We're proud to answer President Obama's call and to be a champion for this critical movement to bring science back to its rightful place in the United States. Thank you.