

Spring 2016 Edition
Expand Your Impact – Digitally!

No matter how small your project, hundreds of people could be watching and learning live via the Web!



Elmo hangs out with Astronaut Ricky Arnold (STS-119) at the DLN



The DLN connected over 5,300 students during "So you want to be a Martian?"



A DLN webcast celebrating National African-American History Month

The DLN Connects Thousands with Inspiring Special Guests

Astronaut interviews have been a favorite event for students, DLN specialists and people around the world due to the excitement of these rare occasions. Just in time for the first flight of the Orion spacecraft (EFT-1), NASA's amazing astronauts were visited by a very iconic, pint-sized and giggly red guest - Sesame Street's one and only Elmo! More recently, the DLN helped NASA and author Andy Weir (*The Martian*) reach out to students to explain the differences between science fiction from science fact.

However, you don't need to spend time in orbit or be a celebrity to help inspire students!

Whatever adversity you have overcome, students need to hear the success stories of NASA's scientists and engineers to know that the stars are never beyond their reach.

The DLN Puts you in Classrooms without Ever Leaving Center

The DLN understands that it can be tough to find time to travel to a school to talk with students. No problem, the DLN is mobile!

In many cases, we can bring some of our broadcasting equipment from our studio to your location. In fact, most students can really benefit from seeing the places where scientists and engineers actually work. The farthest you would ever need to travel is the DLN studio located at your Center!



DLN Specialist Rachel Power visits the Vehicle Assembly Building

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Custom Modules

One of the DLN's most well-known services is delivery of instructional modules related to NASA and its missions directly to classrooms. Today, we offer ten such modules on a regular basis.

The DLN, as part of Agency-wide efforts associated with the movie *The Martian*, developed a timely custom module called "Surviving and Thriving on Mars" that was made available while the movie was still in theaters.

The DLN team has teaching, presenting, and curriculum design experience. For high visibility educational campaigns such as *The Martian*, the DLN has experts able to help you through the entire process from planning to production.



What is Digital Expansion?

In short, Digital Expansion is all about harnessing the power of the Internet to reach more students and in new ways. If nothing else, simply broadcasting face-to-face activities that you already have planned via the Internet allows you to reach any student who was too far away to attend. **No matter how small your project, hundreds of people could be watching and learning live via the Web!**

Right: DLN Specialist David Alexander presenting in front of a green screen



Additionally, there are simply lots of places that students will never get to see. From clean rooms to wind tunnels, it is either difficult or dangerous to take students to some of the most interesting places where you work every day. With little more than a webcam and a Wi-Fi signal, the DLN can be the eyes, ears, and hands of the world. With the help of DLN, students aren't just passively watching some pre-recorded video —they're practically right there because they can interact! For example, the DLN supported a series of live, Spanish video chats, "Students Talk About Real STEM" with NASA professionals who work in related areas. During the event or prior, attendees had the opportunity to also submit questions via Twitter or email.



Types of Technology

The Internet is a huge place, and is growing faster all the time. Keeping up with the latest and the greatest can be a real challenge. The list below highlights a few popular technologies that are used for digital expansion. If you are unfamiliar with any of these, a DLN Specialist would be happy to provide training to you.

Videoconferencing

Long before smartphones, in order to see the people you were talking to halfway across the world, you needed specialized hardware to do it. Many schools invested in this equipment in the 90's and still use it today.

Webconferencing

Today, every modern web browser is capable of sharing smiling faces over the Internet. Numerous desktop programs and mobile apps also offer this ability, and many laptops have the webcam and microphone already built-in!

Webcast

Live video or audio can be broadcasted across the Internet. In many cases, students can interactively ask questions in real time via chat, email, or social media.

History of the DLN

In 2000, three NASA Centers (GRC, JSC, LaRC) began to experiment with production capability for distance learning. The NASA videoconferencing system (ViTs) was in place and used mostly for meetings but not used as frequently for education purposes. In January 2002, NASA's Office of Education agreed to provide start-up-funding, and the NASA-Iowa Connection project was first launched.

Many partnerships between professionals at all NASA centers began to emerge – ultimately becoming the Digital Learning Network (DLN). By 2005, the DLN was serving all ten NASA Centers (including JPL).



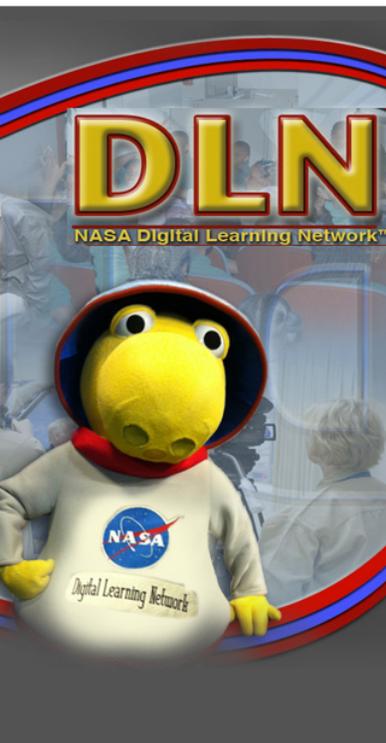
Behind-the-scenes video magic

Over time, the DLN has offered many technology-related services to several other projects in the NASA Education portfolio while reaching nearly 150,000 students and educators every year with its own interactive events.

The DLN has received several awards, including former DLN Director Dr. Robert Starr being inducted into the US Distance Learning Association's Hall of Fame.

Today, the DLN is on a fast track to becoming a robust infrastructure for any kind of educational opportunity to be expanded across the Internet: from scientist to students of all ages, from Center to Center, and from NASA to the Nation.

The DLN has the equipment, experience, and enthusiasm to help you expand your impact — digitally!



What is the DLN?

To teachers, the DLN has become synonymous with high quality internet-based educational experiences. However, the DLN is not widely understood by NASA's own scientists and engineers. It is common to hear the DLN compared with simple video chats such as Skype. While the DLN uses such software, we provide much more than a talking head on a screen! Of the three words that name the Digital Learning Network, learning is central to the DLN's overall purpose. Today's DLN employs a carefully-chosen set of media dissemination platforms including the most current, and we are always searching for the next big thing.

The DLN incorporates evidence-based educational techniques and on-camera presentation skills to provide a strong medium to reach students and teachers alike.

In other words, the DLN provides the infrastructure to meet NASA's education goals in meaningful ways that are educationally sound, standards-based, and engaging.



Host Bonnie Murray facilitates the discussion between NASA's Jill Prince and NASCAR's Jimmie Johnson during "Drag is Bad for Cars and Good for Mars"



All ten DLN studios are being equipped with state-of-the-art technologies to maximize your distance learning objectives. Each NASA field center (including JPL) hosts a DLN studio to broadcast virtual visits, special events, and workshops to students and educators across the nation. A dedicated DLN Education Specialist is available at each center to serve as a coach and to prepare and support on-camera talent for virtual classroom instruction. The DLN can deliver to almost any internet-enabled device! Just a few specific options:

Types of Service

Training

Learn how to be an all-around better presenter or practice with specific technology

Videoconferencing

Interact with up to three locations with high-end dedicated hardware!

Webconferencing

Interact with up to 200 Internet-connected locations at once!

Webcasting

Broadcast live video with the whole world!

NASA TV

Televise your latest breakthrough while letting the DLN handle the connection!



The whole DLN team is here to help you – just an email away!

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