

ASTROFX PRESENTER

AstroFX Universal Distance Learning Systems (DLS)

bowentechnovation.com/systems/immersive/dls

We all greatly value the presence of live presenters in visitor experiences. Electronic and internet communications have extended the reach of the modern planetarium presenter far beyond the containment of the physical walls. At BT we sometimes refer to this as the modern "planetarium without walls".



One core capability that expands reach is the addition of new reliable, lower cost distance learning systems (DLS). This means you can have guest presenters from anywhere in the world conduct talks in your dome and you can stream your presentations in real time or prerecorded to other sites, schools, and even homes with homeschooling.

For many years DLS for education was only found in well-equipped university lecture halls and class rooms and on occasion in more advanced museums, science centers and zoos. With these early adopters the only choices were proprietary self-contained code/decode technologies that also required annual license fees and service contracts... not to mention a significant amount of technical expertise. And the viewer on the other end often had to have the same system to make it work.

Not any longer...*AstroFX Universal DLS works with and between any new or existing systems.*

The Technology in the Dome (Near End)

Here are the necessary components:

- **Specialized Low-light Camera.** For this type of work you will want a PTZ camera. This stands for **Pan-Tilt-Zoom**. Via Ethernet remote control connection you can have the camera in any location and move and zoom it to capture the presenter, the dome, or audience members. The



Bowen Technovation

designers of electronic media

camera can be mounted to wall, in a cove or on a movable tripod stand. Some sites have two cameras so they keep one on the presenter and one on the dome.

Camera Controller. This little unit is specific to the camera manufacturer and allows the above mentioned motorized camera control.

Switcher. This allows you to switch between cameras, computers, document cameras and other media and send the selected signal to the streamer and the Presentation Projector.

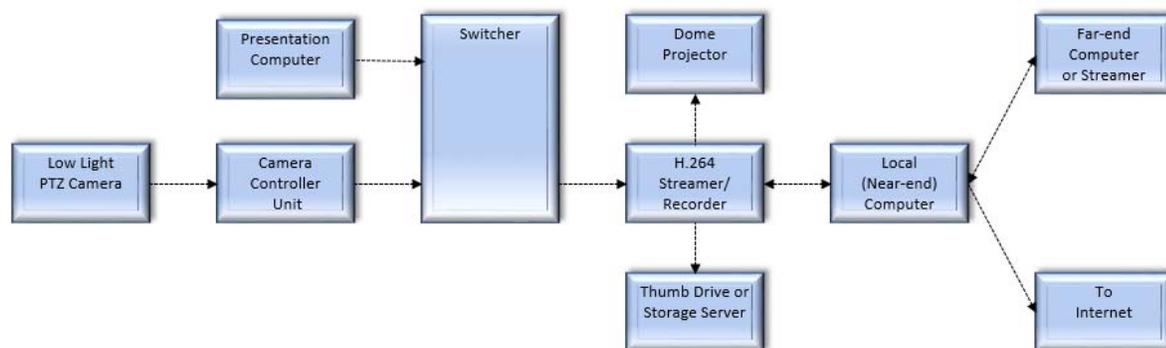
Streamer Recorder or Network Bridge. This little interface merges all audio and video sources from the dome to an outgoing network feed and merges audio and video from a network feed into the theater audio and projection systems. You can also select a unit that records your dome presentation to a thumb drive, a thumb drive or to a networked server. These can then be handed out to teachers or students or streamed at a later date. Some of these units also allow you to split the image into 2-3 sections so you can show the PowerPoint on ½ of the screen and the presenter on the other ½. Or a specimen under a document camera on ½ and a PowerPoint on the other.

Presentation Projector. You will not want to use your astronomy projection system for this application. The image will be too large and the resolution will not be as good as using a separate projector. Also using this separate projector will save wear and tear on your astronomy projection system.

Auxiliary PC. Connects the Network Bridge to the actual Internet.

The Technology at the Far End

The far end participants might have a system as flexible as yours...or not. All they need is simple typical webcam with mic, computer and monitor or projector...in a dome, classroom, or office. No expensive software is needed. They have their choice of Skype, Cisco Jabber, Adobe Connect 8, Microsoft Lync, WebEx, Citrix GoToMeeting, LifeSize ClearSea, Polycom M100, Vydyo, Google Plus.



Bowen Technovation
designers of electronic media