

Air Force One Discovery Center Simi Valley, California

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Air Force One Discovery Center is part of the Ronald Reagan Presidential Library in Simi Valley, CA. An interactive historical theater, the Discovery Center gives students a “total immersion” experience into the Presidential decision-making process. This technologically integrated 5,000 square foot space includes replicas of the Reagan-era Oval Office and White House Press Room; a military situation room (Command Decision Center), modeled after the U.S.S. Ronald Reagan naval warship, and a real Air Force One simulator; the same one used to train pilots.



Four Crestron TPS-6L wall mount touchpanels are featured in the front lobby, mock Oval Office, press and situation rooms. They provide real-time intervention capabilities, such as “start show” or “emergency stop.”

The project was conceived by Mira Cohen, Director of Education at the Reagan Library. Cohen worked closely with Curtis Kelly of Delicate Electronics Sales (Camarillo, CA) to turn 58 pages of script into a fully interactive, integrated media experience for fifth to eight grade students.

To engage elementary school children in the project, the team gave the simulation the feel of a video game. Utilizing state-of-the-art control systems from Crestron and theme park electronics engineering firm Alcorn McBride, all rooms feature interactive video, audio, sound effects and lighting.

As Kelly explains, “We worked through the script – line by line – to determine exactly how to sequence the video, audio and lighting. It was pretty challenging.”

As part of the 50-minute exercise, the students role-play the historical figures involved in the decision to invade Grenada in 1983. Pre-visit, the students receive a dossier explaining the history of the Grenada invasion, and are assigned the parts they will play: advisors to the President, top level military officials, members of the White House Press Corps, and the President himself.

Kelly, along with his integration team of Tony Caraffa and Paul Bange, created this stunning interactive environment. Specific logic was required for the playback of content in each room, as flat panel TVs show videos that present progressive problems and possible solutions. The data is analyzed, solutions considered, and the students choose either path “A” or path “B” while a clock counts down on screen.

Every step of the way, the chain-reaction of events is affected. To heighten the sense of reality, special effects – such as flashing lights or engine hum – occur to suit each scenario in each room. Through the combination of pre-visit materials, dynamic video presentations and post-visit discussions, students practice and improve their critical thinking and decision-making skills.

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An Alcorn McBride V16 Show Controller locks to timecode in order to synchronize scripted, disparate events, and the company’s Binloop stores the 27 video segments as MPEG2 files on Compact Flash media.



Crestron Authorized Independent Programmer (CAIP) Michael Block of Anaheim, CA developed a protocol enabling bidirectional communications between the Alcorn McBride and Crestron control systems. Cues from the V16 can trigger the Crestron PRO2 control system and 12x8 video matrix switcher to route certain clips to specific TVs, while the PRO2 can prompt the V16 to start an event after a planned or unplanned delay.

"The technology is so stimulating, it makes the experience feel authentic," Cohen said. "The students are compelled to interact with each other as a team, as if they were part of the White House staff or the press corps." All of the technology brings the ultimate conclusion – whether or not to invade Grenada – into sharp focus with dramatic impact.

In each room, a camera records the students at work. When they're done, they sit in the jet simulator as if they were flying back to the Reagan Museum. Actual archival news footage gets shown on drop-down screens with student video inserted in "news flash" style. "It's great to hear the kids say, 'Cool, that's me!'" Kelly enthused.

"It's a decision being made in the Oval Office, acted upon in the Command Decision Center, and questioned by the White House press corps," Kelly sums up. "Throw in British Prime Minister Margaret Thatcher's vehement opposition and a flight to Grenada on Air Force One, and a slice of history from 1983 really comes alive for these kids."



Since the Center opened in May, 2008, over 15,000 students have participated in the program, and bookings haven't slowed. Even with all this use, not one service call has been required.

In December 2008, Air Force One Discovery Center at the Reagan Presidential Museum and Library won a Thea (Themed Entertainment Association) Award for "Outstanding Achievement: Learning Experience."

