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CEI Completes Major Integration Work at Massive New Library of Congress Archive Facility

Newington, VA – Nov. 15, 2007 – Communications Engineering, Inc. (CEI) announced today it has reached a significant milestone in a major integration project for the new National Audio-Visual Conservation Center (NAVCC) at the Library of Congress Packard Campus in Culpeper, VA. CEI is handling the final designs, installation and integration of all the equipment that will be used for digitizing the massive audio and video archives at the NAVCC, which contains the world's largest and most comprehensive collection of films, television programs, radio broadcasts, and sound recordings.

The facility has been turned over to the Architect of the Capitol, and many areas constructed by CEI are now operational. These include seven audio conversion rooms and three video conversion rooms, featuring a variety of playback equipment that will be maintained, repaired and calibrated by CEI technicians. Sophisticated acoustic materials were installed in the rooms to allow engineers to carefully monitor and control the recordings as they are replicated. CEI is also installing systems to allow the digitization of all types of source material and creation of data files from the original content.

The NAVCC contains underground storage for its entire collection – 5.7 million items -- on 90 miles of shelving. The campus will have capabilities and capacities for the preservation reformatting of all audiovisual media formats and their long-term safekeeping in a petabyte-level digital storage archive. The NAVCC includes 415,000 square feet, 35 climate-controlled vaults for sound recording, safety film, and videotape, and 124 individual vaults for more flammable nitrate film.

CEI was challenged with handling the wide range of formats that the original materials use, many dating back to the 1800s. This meant acquiring a wide variety of equipment for playback -- often very old machines that needed refurbishing -- as well as the broadest range of conversion equipment, in addition to building several screening and playback rooms.

Much of the NAVCC facility was previously used by the Federal Reserve Bank as a depository for emergency funds in the event of a major disaster, such as a nuclear attack. The underground, climate-controlled vaults in the building made it well-suited for holding valuable, often fragile films and recordings, but its original design, with inadequate conduits, power and HVAC, also presented challenges for converting it to use by the Library.

Special consideration had to be given to the specialized equipment in the construction of the playback rooms, such as creating extremely stable environments for audio turntables. Compressed air had to be supplied for the numerous 2-inch quadruplex format videotape machines throughout the

building. In addition, the reference levels for the variety of playback and recording equipment had to be precisely checked and maintained.

“The material here represents the living memory of the United States, and this project will allow us to better protect it while also moving it into a more accessible format for the public,” said Steve Nease, Chief Technology Officer for the NAVCC Motion Picture, Broadcasting & Recorded Sound Division. “This is also the last place that some of these formats, such as wire and wax cylinder recordings, will survive, so it’s crucial that we take great care in preserving the material and equipment.”

“The numerous formats and media types being housed and converted at the NAVCC presented many challenges, but they also made this project very interesting,” said John Wesley Nash, Executive Vice President and Chief Operating Officer of CEI. “It is also especially rewarding to play a role in enabling the digitization of so much valuable material that will ultimately be used and appreciated by greater numbers of people for generations to come.”

The NAVCC will also host a regular series of film and television programming in its 206-seat theater. The state-of-the-art projection booth, built by CEI, will be capable of showing everything from nitrate film to modern digital cinema. The theater features two 16/35 mm projectors and two 35/70 mm projectors, allowing films to be shown side by side for comparison. Two more screening rooms each have two 16/35 mm projectors. CEI also installed audio-video monitoring and playback systems in NAVCC’s executive conference room and in three smaller meeting rooms.

Background:

CEI, located in Newington, VA, is a leading, award-winning broadcast and multi-media systems integrator. The company also offers complete equipment service, support and training, and supplies products and services to federal agencies and organizations through GSA. CEI has helped to define the leading edge of systems engineering and implementation for the communications industry since the mid1980’s.

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