

## Sparing No Expense to Hear a Nuclear Waste Disposal Case

*The NRC is not short of funds ... they just charge everyone else whether they like it or not.*

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It is a hearing room where, quite possibly, nobody will ever signal the "aha" moment of argument by waving a piece of paper, or brandish a highlighter to isolate a crucial fact. If it goes as planned, in fact, it will have hardly any paper at all.

The Nuclear Regulatory Commission hired Nortel to build linked, computerized courtrooms in Maryland and Nevada.

It is the Nuclear Regulatory Commission's new computerized courtroom, built in anticipation of a marathon hearing on the question of burying nuclear waste at Yucca Mountain in Nevada. Congress gave the commission up to four years to hear the case, although it could take longer.

Along with the technical challenge of showing the mountain to be a safe place to put waste for hundreds of thousands of years, the various participants in this case — the commission staff, the Energy Department, the state of Nevada, local governments, Indian tribes and probably some environmental groups, and the lawyers representing them — also face the challenge of keeping straight all the studies, testimony, evidence and other details. At times, there may be three sets of administrative law judges working concurrently.

The chief administrative law judge of the commission, which is supposed to rule on a license application, had visions of lawyers groping for some fact and saying, "just a moment, your honor," then turning to a mountain of documents to find the relevant one and disappearing for minutes or hours.

So the commission set up a high-tech alternative: two linked, computerized courtrooms — one on the second floor of its office complex here and one in Las Vegas — that will let lawyers and others involved in the hearing search millions of pages of records almost instantly, calling them to their own screen or those of other participants.

"As a practical matter, they will still bring paper," said G. Paul Bollwerk III, the commission's chief administrative law judge, who oversees the judges who rule on license applications. "But if it's a lot less paper, it's a positive step for everybody."

Supplied by Nortel Government Solutions, an American subsidiary of the big Canadian networking company, the system has cost about \$6.2 million since work started in 2001. The Yucca Mountain hearings are not expected to start until 2008, if then.

The hearing room here, built in 1994, has space for 3 judges, up to 6 witnesses, up to 9 other participants (including lawyers and commission staff members), a court reporter and 50 spectators. The Las Vegas version is bigger, with seats for about 30 participants and 400 spectators.

Each participant has a microphone that is keyed to a voice-activated video system. When someone starts talking, a small ceiling-mounted camera automatically pans to that spot

and zooms in, and the speaker's image appears on computer screens visible to everyone in the room and in the other courtroom as well.

But the screens show more than just video; they also carry subtitles, like those on closed-caption television, entered by the court reporter and displayed immediately. That text is searchable, with a keyboard and mouse on each desk, and on playback, shows the audio and video. If the search results include evidence that has been annotated — say, a map or a chart that a previous witness has used a mouse to "draw" on — that, too, will pop up to the screen, complete with annotations.

In a back room nearby, a bank of computer servers will hold the data and testimony and record the proceedings. A home-style digital video recorder that can be used to replay recent passages of testimony the way a court reporter would read back a transcript, will back the system.

The archived materials will be available not only in the courtroom but also, with a password, over the Web.

Everything will be recorded except for information on safeguards, like that related to sabotage, diversion of weapons materials and similar topics. The system also allows instant messaging among participants, although in this installation it is limited to the judges and their clerks, and those messages are not archived.

If the judges call the lawyers for a bench conference, a "white noise" generator drowns out the conversation.

The system provides most of what the commission would need to Webcast its sessions, a prospect under discussion.

Nortel executives say that various other courtroom systems offer some features of the one they built for the commission, but that theirs is the first to tie everything together, including integration of video images with transcripts.

Other government agencies use teleconferencing. The National Transportation Safety Board has a computer system that allows hearing officers and staff members to trade instant messages during proceedings, so that its personnel can send an electronic whisper to an investigator who is deposing a witness, suggesting another line of questioning. But the commission's new digital courtroom, thus far unused except in tests, is more automated and is capable of handling proceedings in multiple locations.

The next trick being worked on, according to Andrew Welkie, the commission's project manager, is a portable version that could be set up easily in hotel conference rooms, for reactor licensing cases or other matters.

This is not the nuclear commission's first foray into high-tech proceedings. In January 1996, officials tried out a combination of videoconferencing and Web conferencing; for that test, the chairwoman of the commission and others had to walk across a six-lane road outside their headquarters to a Kinko's in a strip mall across the street.