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1	UNITED STATES OF AMERICA
2	NUCLEAR REGULATORY COMMISSION
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4	LSNARP MEETING
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7	Alexis Park Resort
8	375 E. Harmon Avenue
9	Las Vegas, Nevada 89109
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11	Wednesday, February 23, 2000
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13	The above-entitled meeting commenced, pursuant to notice, at 8:45
14	a.m.
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16	PARTICIPANTS:
17	JOHN C. HOYLE, NRC
18	DANIEL GRASER, NRC
19	GLEN FOSTER
20	CHIP CAMERON - NRC
21	ABIGAIL JOHNSON, Colorado
22	JUDY TREICHEL, Nevada
23	STEVE FRISHMAN, Nevada
24	ENGELBRECHT VON TIESENHAUSEN, Clark County
25	MALACHY MURPHY, Nye County
	PARTICIPANTS: [Continued]
Al	CLAUDIA NEWBURY, DOE N
R: E	L DENNIS BECHTEL, Clark County
& A\$	JASON PITTS, Lincoln County S
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[8:45 a.m.]

MR. HOYLE: We'll try to get started. This is the second meeting of the Licensing Support Network Advisory Review Panel. As you know -- most of you know, this is really the continuation of a former advisory panel which gives advice to the Nuclear Regulatory Commission under the rules of the Federal Advisory Committee Act, and we're operating under those rules today. This is an open meeting and it was prenoticed more than 30 days ago.

My name is John Hoyle. I'm chairman of this panel, a part-time NRC employee. And with me at the head table here or the front of the head table are two other members of the Nuclear Regulator Commission, and I'll let them introduce themselves and we'll go around the table and introduce yourself please. Let me start with Dan.

MR. GRASER: I'm Dan Graser from the Nuclear Regulatory Commission. I'm a Licensing Support Network administrator.

MR. HOYLE: Mal.

MR. MURPHY: Mal Murphy. I'm the Nye County regulatory and licensing advisor.

MS. NEWBURY: Claudia Newbury, Department of Energy.

MR. BECHTEL: Dennis Bechtel, planning manger for Clark County.

MR. FRISHMAN: Steve Frishman, the State of Nevada.

MS. TREICHEL: Judy Treichel, Nevada Nuclear Waste Task

MR. CAMERON: Chip Cameron, Office of General Counsel, NRC.

MR. HOYLE: Thank you very much. And thank you all for  $^{
m L}$  coming, members certainly, those in the audience as well. I want to emphasize the importance of the participation on this panel and the advice that this panel is going to be giving the Nuclear Regulatory

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Commission. The Commission, of course, has had the potential of licensing proceeding on the front of its plate for sometime and, as we get closer and closer to that point, the Commission is going to listen closely to what this panel has to say about the licensing support network. So I consider your advice. Hopefully we will conclude today by determining what alternative system we would like to recommend to the Commission. It's going to be very important. Dan Graser has put together an agenda which I think you all have. It should keep us pretty busy for the rest of the day it looks like to me. I think, Claudia, if you're ready to start, we'll hear from you first.

MS. NEWBURY: This is going to be pretty short.

MR. FRISHMAN: Claudia, before you do, do the rest of us get some opening remarks, Mr. Chairman?

MR. HOYLE: Certainly, and I think maybe Steve was going to say that as well, so, yes, let me open it up for opening remarks.

MR. FRISHMAN: Well, I guess there's something that's been wearing on me for a long time and I've -- I'll say it as clean and blunt as I can, and that's that I don't like calling this whole operation the Licensing Support Network because we do not support licensing. I think we need to call it a comprehensive database and I think we ought to keep it really simple and have DOE put their data out, we'll put our data out and we'll just go from there. We're not in the system of supporting licensing. And it's become -- it's gotten to be, you know, just from my having been gone for the last two weeks on business having to do with this program, I get back and find my e-mail loaded with paper that is almost incomprehensible anyway for something that is as simple as somebody putting their data out on the net and letting it be and we all use it. If you remember in the last meeting, I said that the reason that we're even in this business at all is so the NRC can make its I three-year licensing deadline, and from that, the purpose was to speed

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AN. RI EY & AS OC AT up discovery. Well, discovery can be speeded up with what exists in the electronic world right now without a whole bunch of paper on top of it. If DOE would just put their data out there, that would be wonderful, and we'll be glad to put our data out there. But to build a bureaucracy around a database to me just seems to be an enormous waste of time, money, and energy.

MR. HOYLE: All right, Steve. Thank you.

MR. FRISHMAN: And that's my opinion for today.

MR. HOYLE: All right. Thank you.

MR. MURPHY: Yeah, just very briefly. I've got some of the same sort of concerns that State just expressed. In going over the documents that Dan submitted and in some of the -- I must, you know, confess that I didn't keep up with the technical working group meetings minutes as quickly as I should have, but in going over them just in the last couple of days, it's occurred to me that we -- that with some of these alternatives, three and four particularly, we are in grave danger of losing entirely the benefit of the LSN rule and going back to the old LSS, and that is certainly not what I thought we were doing when we amended the rule to take advantage of the worldwide web. I don't remember now, but I -- why we did it, but I'm wondering why we so cavalierly discarded alternatives one and two. It seems to me alternative one and perhaps -- and maybe alternative two were more clearly reflective of the intent at least of this body and hopefully of the NRC when it adopted the LSN rule and made the strategic decision to move from a centralized licensing support system to a worldwide web-based licensing support network. So like Steve, I'm very disturbed at the seemingly layer and layer -- layers and layers and layers of the  $^{
m L}$  nonessential requirements that we're now discussing, and it seems to me that they don't provide any real critical process or assistance to potential participants in the licensing process, so I think we need to

seriously consider going back to something akin to alternatives one and two or at least -- at the very least focus on alternative five rather than three and four.

Also, and it's -- we can discuss it when we get to it, it seems to me, as I read both the rule and draft functional requirements, Dan, there are proposed functional requirements which go well beyond the requirements of the rule itself that I think, in my personal opinion, have no basis in law whatsoever.

And finally, I am going to have to leave at 3:30 to go to another meeting with my client, the project manager for Nye County. I think we -- you know, that's not going to be a problem but I may want to get my two bits' worth in early at 3:00 agenda item when we get done talking about recommendations. Thanks.

MR. HOYLE: Thank you, Mal. Further comments from --

MS. TREICHEL: Yeah, I would just like to also I guess echo the call for -- just an integrated database rather than something that supports licensing. We've just come out of all of the hearings on the EIS and one of the big problems was the lack of current data that was included in that analysis, and people had submitted stuff and it didn't get there or it wasn't considered. And so the bottom line for me and I think for anyone that's a public advocate or a public representative is just going to be that a lot of stuff gets in, that everything gets in actually from all different directions and that you can get to it and it does get very difficult when you start layering on stuff that -- because people are at so many various levels of expertise and equipment and money and all of that sort of thing. So that's it.

MR. HOYLE: Dennis?

MR. BECHTEL: Maybe just a brief comment that, having gone through the review of the viability assessment and more recently the DEIS, I also am hopeful that the information is available in a timely

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way, and I look at this potentially this group as being, as kind of serving an audit function to ensure that that happens. I don't have time to -- for the complexity sake, I rely on, say, the NRC to ensure that whatever system is -- that we select is -- we're able to do that. But I don't want to go through the recent experience of getting into a review period and not having documents to be able to review, so hopefully, if we're able to do that, I think we'll accomplish something.

MR. HOYLE: Okay. Thank you. You want to comment on these comments or --

MS. NEWBURY: Do a little comment on it then I'll just go through my action item, if you will.

MALE VOICE: Well, I'd like to comment after your comment anyway.

MS. NEWBURY: Okay. Bearing in mind that this is set up as a discovery tool for licensing and that is the only reason the NRC is sponsoring this, I'm not totally in concurrence with what Steve had to say, but I do support a lot of what Mal says. I think that the system has gotten more complex than it was intended to be and goes beyond --

MR. HOYLE: Pull your mike up just a little closer.

MS. NEWBURY: And goes beyond what we expected the rule to accomplish when we changed it from a licensing support system to a network, so I agree with Mal.

MR. HOYLE: Okay. Thanks. I guess I just wanted to comment that one of the purposes for us today is to hear what the technical working group did in the meetings since the last meeting of this panel, and hopefully they will go through alternatives one and two again for us, and if -- it was the technical working group that suggested that we might not want to look much closer at those two, but this panel has not taken any action in that regard. So let's hear the presentations and S decide, you know, as a group what advice we would like to give the

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MR. GRASER: Yes.

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MR. HOYLE: Dan? It's hard to hear in the back so we're going to have to speak closely into the microphones please.

MR. GRASER: I would just like to echo what John just brought up is that the technical working groups did examine alternatives one and alternatives two and we have included analyses of those options again and we can certainly go into those in more detail than what we had planned on the agenda so that the AR -- the full ARP has the benefit of going through those options and alternatives. So we can certainly do that. We brought the materials along to support such a presentation and such a discussion. The other thing that I would like to mention is that the rule -- I view the rule -- the way I look at the rule is that it establishes an overall framework within which we have a fairly wide latitude for how we implement the system. And the rule does -- the revised rule does not specifically call out a technological solution and, in fact, it was left deliberately fairly wide open so that you could have a wide range of technical solutions. And if the opinion of the advisory review panel is to go for less rather than more and to simplify rather than make it complex and to strip out layers of bureaucracy rather than to have those mechanisms in there, the opportunity toward the end of the day will be for the advisory review panel to determine how it's going to present its recommendations back to the Nuclear Regulatory Commission. And so, in that context, I think what John will probably be asking for at the end of the day is for the ARP to sit down and figure out, well, okay, exactly what do we want to say to the Nuclear Regulatory Commission and who will lead the effort in  $^{
m L}$  crafting exactly how the advisory panel expresses its desires and to get that documented and to submit that back as an ARP statement back to the Nuclear Regulatory Commission. And the object of having the ARP

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meetings is exactly to elicit that sort of input, so I'm really looking forward to hearing what the best guidance is. And if a simplified system is the system that the participants and the potential participants feel will be adequate toward meeting their discovery ends, then that's fine with me. I don't have any vested interest in building an empire. I do have a vested interest in making sure we accomplish the mission, and that's what I'm looking for is guidance in how far we have to go to accomplish that mission. So thank you all very much for your comments.

MR. FRISHMAN: Let me just ask one thing. Can you define the mission?

MR. GRASER: I would harken back to a letter that Loretta Metoxen submitted to the Nuclear Regulatory Commission back in the old LSS rule days, back in I think it was about December of 1988 where Loretta made an excellent plea that the playing field be leveled so that everybody had equal access and equal opportunity to look at everybody else's documents without the system introducing a technological leverage that favored one of the participants versus others. And so my view of the mission is to make a system available to all of the potential parties with low enough thresholds of participation and low enough levels of technical complexity that it can be used by everybody who's going to be a potential participant to fulfill their needs in finding documents that they perceive the want to use during the licensing proceedings.

MR. FRISHMAN: That sounds good. Let's keep it in mind.

MR. HOYLE: Chip?

MR. CAMERON: Just to provide a little bit of perspective in L terms of the possible intent of this new rule for purposes of our discussion today. One thing that was clear from the final rule on the S L LSN is that the commission wanted to do away with the centralized system

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that would have been created under the licensing support system. And although there are a lot of references in the supplementary information of the rule to websites, the supplementary information also speaks to the fact that the mechanism to implement this requirement, in other words, the electronic availability of documents, the mechanism is not stated in the rule that the availability of the Internet to link geographically-disbursed sites appears to have the potential to satisfy the rules, so I think if you start out with a simple concept of individual websites and you go on a spectrum along the spectrum to this centralized system that we moved away from, there is a lot of latitude about how you accomplish this and I think that the interests of the individual participants on the panel in terms of how that is accomplished is the most important element.

MR. HOYLE: All right. Any further comment? I apologize for seeming to invite you not to make comments, so thank you for all that. All right, Claudia.

MS. NEWBURY: Okay. I had an action item from the last meeting. Dennis had asked a question on whether or not money that has been appropriated from the Energy Water Development Preparations Act by Congress could be used to fund the LSNARP activities and the LSN activities. And I said I would check with my lawyers and get back to you. And I checked with my lawyers and what they said was they think this is great and this is exactly the intent of the law for oversight and the counties are welcome to use the money in that manner. The state, of course, has some other limitations on it and so cannot.

MR. FRISHMAN: And we so much appreciate that.

MR. CAMERON: Can you clarify what those other limitations

L are? In other words, the -- it's okay for the department to provide

to -- the monies that are provided to the affected unit of local

S governments can be used by those local governments to, for example,

establish the websites that make their documents available, but the money that the state gets could not be used for that purpose? I'm just trying to understand clearly what the bottom line is here.

MS. NEWBURY: Yes, and I think Steve can probably address it in more detail than I can because he's more familiar with the restrictions that were put on the state.

MR. FRISHMAN: I don't think this is the place to be discussing it.

MR. MURPHY: Not that I disagree with you, Steve, but

Congress, in its inimitable wisdom has restricted the state in expending
its appropriations to the conduct of scientific studies, and whether or
not that's going to obtain in the future is anybody's guess, you know,
what language congress is going to use. It seems to me that, you know,
the invention and development of the worldwide web was an expression of
science and if the state was to study how it's to implement the
requirements of licensing support rule, I would certainly interpret that
as a scientific study, but --

MR. CAMERON: Perhaps to take another look at that, if this system is supposed to provide for the communication of data, it would seem that that would be a direct output of the conducting of scientific studies. I mean, what is the sense of conducting scientific studies if you can't communicate that data to people? And I guess, Claudia, you haven't expressly stated that the conduct of scientific studies is the limiting factor, but I guess we're all going to put our two cents in on this.

 $$\operatorname{MR}.$$  MURPHY: Well, we may have to hire this panel to be our advocate.

MR. CAMERON: The point is that the state. for whatever reasons, and Steve is absolutely correct, this panel can do absolutely nothing whatsoever about the -- but for whatever reasons, congress has

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seen fit to impose restrictions on the state's expenditure of funds which is hasn't imposed on any other parties. Whether or not those restrictions will be -- will continue or be loosened or removed in the future is anybody's guess, but right now they have problems that the rest of us don't have.

MR. BECHTEL: So, Claudia, the review of deal your lawyers undertook included the review of our annual appropriations restrictions, that's part of the --

MS. NEWBURY: Yes.

MR. BECHTEL: Yeah.

MR. FRISHMAN: So the bottom line on the whole thing is, at some point we will decide how we participate but we also know that we are a party.

MS. TREICHEL: Well, there's also difficulties with public advocacy groups who depend upon either donations or grant funding in that that money is very often, you know, comes with the wishes of the funder as to how it's used and I haven't sought money -- I haven't looked for foundation money for this only because I know that it's not what they call a sexy issue and probably would be very difficult. So there are some of us that, you know, just keep up as we can.

MR. CAMERON: Yeah, I guess the bottom line is is that it's within DOE's purview to make this call.

 $\mbox{MS. NEWBURY:} \quad \mbox{I'm sorry, I was talking to Dennis.} \quad \mbox{I'm} \\ \mbox{sorry, I didn't hear.} \quad \mbox{I was talking to Dennis.} \\ \mbox{} \mbox{}$ 

MR. CAMERON: this is DOE's interpretation at this moment on how those funds can be expended relative to the state and the LSN? I'm just trying to get a sense for how firm it is.

MS. NEWBURY: It's DOE's interpretation of the language that's in the appropriations bill from congress.

MR. CAMERON: Okay. All right. Thank you.

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MR. MURPHY: It's not, you know, I ought to send you a bill for this, Claudia. It's not DOE's call in this sense. DOE has consistently recommended to congress that the state be, you know, fully funded and operate under the same restrictions and -- as all of the other oversight entities, so, you know, it seems to me if it were up to DOE Steve would not have the problem in spending his oversight appropriation as he has.

MR. FRISHMAN: It's DOE bowing to one congressman's interpretation.

MR. MURPHY: Well, it's not DOE bowing to anybody. I mean, it's one congressman imposing his will on the rest of the congress, you might say.

MR. FRISHMAN: Which DOE may or may not deal with.

MR. MURPHY: That's true. But they have bigger fish to fry.

MR. HOYLE: Okay. Thank you, Claudia. Any further comment on that? Thanks. The next item on the agenda we're going to call upon Mr. Cameron to discuss 2.1004 of the rule, qualification on making available in index of documents not placed on participant external collection. Chip?

MR. CAMERON: Thanks, John. I don't -- I'm hoping this is not going to be a long complicated discussion because if it is I really missed the boat somewhere on this provision. But basically going back to the beginning of the original LSS rule, there was a concern that there might be documents that are discovered, so to speak, that were not put on the LSN or the LSS electronically and that when those documents were found that they should be made available to the parties as soon as possible. And this provision deals with a five-day time frame now for those documents to be made available. And it doesn't have anything to do, as far as I can see, with parties making lists of documents available to others lists of documents that were found not to be

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relevant. It's simply if a document's identified that's not on the system, let's get it on the system, let's make it available within a certain amount of time. And there is another provision back in 2.1019 I believe that deals with depositions and a person who's going to be deposed providing electronic index of documents that are relevant to that deposition and indicating which ones of those are already on the system and which ones aren't on the system, perhaps because it's a document that that person annotated in handwriting with marginalia. And I guess I would look to -- I guess I would ask now whether he has any other view on this 2.1004 and also Dan, who I think knows more of what the background is on this.

MR. MURPHY: Right.

MR. CAMERON: Maybe less. Go ahead.

MR. MURPHY: I think I agree with what you said, Chip, if I understand your point. I don't see this as a huge issue personally. Claudia perhaps does because -- documents is, by comparison to Nye's, enormous. But as I read the rule, I see no requirement in there for us to list or provide an index electronically of the documents that we have through our own internal processes consistent with the requirements of the rule concluded are not or and not likely to become relevant to the licensing process. But in Nye County's case, and I'm assuming the other smaller local governments' case, that's not a huge burden if you want us to put an index of the documents in our Purim (phonetic) office and in our contractors' offices on the worldwide web I guess we can do that. I don't see any necessity for doing so. I mean, the documents that are not under any circumstances going to become part of the licensing process. You know, we can do that. That's not a big deal. I'm not going to lose any sleep over that but Claudia might because that list indeed -- and I would if I were running the NRC's documents, it seems to But in Claudia's case, that's a gigantic list of documents, but I

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agree with your interpretation that it's not necessary under the rule.

MR. GRASER: I was just going to add that I seem to recall that one of the discussions that went on when the revised rule was being developed was the whole question of well how do you know what you don't know, how do you know which documents haven't been placed -- haven't been determined to be -- by the participant to be relevant and have not been placed out on the web. Then how do you know which documents have not been placed on the web unless you have some mechanism to look at other potentially relevant materials and then come forward to the presiding officer and make a case that some documents that, in your own determination, may be potentially relevant you found on this index of materials and would now like to come before the presiding officer and make a case that those documents be placed by the other party out on their site in full text with a bibliographic header. So I do recall some of those discussions going on during the time of the process of revising the rule. But again, that's -- it's more along the lines of a question for the lawyers rather than for the techies. Our only concern was to make sure we got a clarification of that because it did come up during the course of technical working group discussions.

MR. MURPHY: I think the question is, you know, who's got the burden to do a little work in preparation for their own licensing case? We have to keep in mind and, you know, this discussion came up even back in '86/'87 when we were negotiating the original LSS rule, but all of these documents and all of these indexes, well, with the exception of Judy and similar organizations, are public records. I mean, anybody who wants to can today walk into our office in Purim and follow the processes established under Nevada law and ask to look at our records or an index of our records. So the only question is do we make that index available in the first instance on the first page of our website and does DOE, or is that list made available to the world

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including the attorneys on the other side of the licensing process in some other fashion. It's not a question of are they going to be able to find out what documents we have which aren't -- which we don't consider relevant or are they not going to be able to find that out. The only question is how and how quickly I suppose is a necessary subset of that first question.

MR. CAMERON: And I -- there's two issues here and one is perhaps legitimate issue of whether there should be such an index provided and how. The second issue is whether to -- whether there's any reflection of this in a rule at this point. And I can't find any reflection of it in the rule, particularly in 2.1004, the Pedroter (phonetic) issue of whether from a policy matter we need to have this list of documents that were found to not be relevant would be an issue for the panel and also if the panel found that that would be a requirement, would the rule need to be amended to provide for it.

MR. HOYLE: In hopes of clarification and this might be the cart behind the horse here, I'd like to read into the record the section we're talking about. Section 2.1003 is entitled availability of material and that talks about the material that you should -- that a party or a potential party should be putting into the system. And it lays out in some detail what that types of material should be. And then 2.1004 is entitled Amendments and Additions, and it reads, "Any document that has not bee provided to other parties in electronic form must be identified in an electronic notice and made available for inspection and copying by the potential party, interested government participant, or party responsible for the submission of the document within five days after it has been requested." And it goes on and lists other times been allowed by the prelicense application presiding officer. So it doesn't talk about a list. It talks about the possibility that another participant or potential participant knows of a document that's not on a

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RIII EY & ASS party's list and says, "Hey, how about this document?" And once that is identified, then the party that owns that document needs to follow 1004 and get it up electronically.

Now, that's a very simple reading of that rule, but I just wanted to put it in context here for those particularly who do not have a copy of the rule before you. Any other comment then? Claudia?

MS. NEWBURY: Yeah. That section follows right after the availability of materials section where it discussed documentary material that is not provided in electronic format.

MR. HOYLE: Uh-huh.

MS. NEWBURY: There's a section there. And I -- doesn't this follow from that that if you have information that you have provided a header for that not an electronic format; isn't that what they're requesting? This is not documents that we've decided are irrelevant. I agree with Chip. This is stuff that's already listed in our bibliographic headers that we did not provide the electronic information for.

MALE VOICE: Well, that's --

MR. HOYLE: You talking about raw data?

MS. NEWBURY: There's a whole list of things here that are not provided in electronic format.

MR. MURPHY: Uh-huh. But I think it also refers to documents that people run into. I don't want to use the word discover because that's a term of art in the law. It refers to, as I recall the negotiations and the discussions of this language, refers to documents that people might run into in the course of their own preparation for the licensing process, particularly including taking depositions of potential expert witnesses. If you're talking to some scientist and he says, "Well, I remember I made some notes about work I did out on such S and such a field trip, but, you know, they're in my office somewhere,"

you can request them and you need to have them delivered within five days. I've never interpreted that as meaning that we had to put our entire index or that anybody had to put its entire index on the web. But again, I mean, so I agree entirely with Chip that that -- that the rule doesn't require that. It -- but, you know, for the smaller participants like Nye, it's not an enormous burden for us to do that. But, you know, it's a --

MS. NEWBURY: It would be burdensome for use.

MR. CAMERON: Dan, is this clarified for your need?

MR. GRASER: Absolutely. I -- you know, as long as everybody has that what seems to me a fairly shared understanding. I think that answers the question as far as I'm concerned.

MR. MURPHY: I don't think there's ever been any question of our need to list electronically with a header or with some other descriptive for the documents that we identify as potentially relevant but which were, for some reason or other, we're not putting on the website because they're raw data, because they're attorney/client privilege, or whatever. I mean, clearly we need to identify them and list them like that.

MR. GRASER: And then that's where 2.1004 would kick in and say, if you have a document that was not previously made available in text --

MS. NEWBURY: Correct.

MR. GRASER: -- then --

MR. MURPHY: Plus this other class of documents that people stumble across in the course of --

MR. CAMERON: And keep in mind that 2.1003 already takes I would attach to. It's just a case of it was missed somehow. And if a

party wants to -- who owns that wants to challenge whether that indeed is relevant, a relevant document or is privileged, then that can all be processed before the presiding officer. So it's broader than just documents for which a claim of privilege exists or for so-called graphic-oriented material that aren't subject to capture in electronic form.

 $$\operatorname{MR.}$  FRISHMAN: Okay. Thank you. To close that off, I agree with the outcome of this.

MR. HOYLE: We have a new member of the panel joining us. Please introduce yourself.

MR. PITTS: Jason Pitts, Lincoln County.

MR. HOYLE: Okay. Jason, it's hard for people to hear us without the mike, so why don't you pull that one up close for any comments you would like to make. Thank you. All right. Moving along. Unless there's any further discussion of that item. Dan, do you wish to summarize the October and December technical working group meetings, please?

MR. GRASER: Okay. Thank you very much, John. The technical working group, for those of you who may not have been at any of the previous licensing support system or licensing support network meetings including the meeting last October, I'm just going to walk through very quickly what the role and function of the technical working groups for this advisory panel has been laid out. The technical working group objectives is essentially to perform investigative or research or analytical sorts of activities, and because this rule deals with a computer system, this is focusing on computer technology specifically design alternatives for implementing licensing support networks. So the technical working group that met after the October advisory review panel and later again in December was focused specifically on going off and exploring technical options and alternatives. The technical working

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group then returns back to the advisory review panel with the results of their findings and it's up to the voting members of the advisory review panel to then determine what do we do with this information. And so that's the charter of the technical working group. And as I mentioned, we had meetings in October and December. The -- I apologize for swamping people with e-mail but I've always been of the opinion that more information is better than none, so I did send out copies of the technical working group meetings and I believe I sent them out as the technical working group meeting minutes became available, and then I also sent a copy of them out as part of the background package for this meeting.

The technical working group participants -- and this is a compiled list from the entire October and December sets of meetings. We had some individuals who attended all of the meetings. We had other individuals who sat in on perhaps one of the sessions but not all of them. And I just wanted to list the individuals who participated in some or all of the technical working group meetings, and I wanted to thank them very specifically for their participation, for the time and effort that everybody put in. You can see we had some cross representation from various different participants and potential participants. Okay. That list of the TWG participants is included in the handout set of the overheads that have been provided to everybody.

The first meeting we had actually commenced the day before the October advisory review panel meeting and then subsequently met for the two days following the ARP meeting. As described in much more detail in the working group meeting minutes that were sent out, the technical working group reviewed the initial three alternative solutions that were presented at the October advisory review panel meeting. And as was already mentioned this morning, although the technical working group found them wanting in certain respects, according to our

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understanding and so forth, we did as a group give those two alternatives a fairly thorough walk-through and scrubbing, so we do have presentation materials as a result of all of those discussions. And, as I said, we've included them in the package so that they are available later today for us to walk through in more detail. And if, in fact, the advisory panel feels that the technical working group probably should not have thrown those options out, that's fine. We can resurrect them without any great degree of difficulty and certainly have a spirited discussion on the merits of those technical solutions.

But during the process of the October meetings, as I said, the technical working group essentially looked at the first two of the alternatives and found from our perspective at that time what we felt were made them non-starter issues. They had certain aspects of the implementation that would not have made them especially user friendly or have made them more difficult to get an under -- full understanding of which responsive documents all of the parties had available out on the web. We can go through those in more detail in the later presentations today. For each of the alternatives that we reviewed, we walked through technical description of each of those and looked at a number of different attributes or aspects of those technical implementations and I've listed them down at the bottom of this particular slide. For each of the alternatives that we explored, we looked specifically at issues such as how the system would be integrated, server performance, what would be the impact of clean text versus dirty text, search engine performance, web security which is certainly in everybody's consciousness after the events of the last few weeks. We looked at aspects that dealt with how you would be able to determine if the system  $^{
m L}$  is adequately performing for the users, training, data, maintenance, and so forth. So it was a fairly exhaustive list of salient features for each of the systems and the technical working groups had some very

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RI EY & AS animated and lively discussions about all of those. There was very active exchange of thoughts and ideas about all of the systems.

During the course of that October meeting, in addition to looking at the initial three design approaches, representatives from the Department of Energy proposed another technical solution. It was a variant of one of the solutions that was originally presented in the October ARP meeting. That variant became our alternative number four. So when we left the October meeting, we had one of the original three that we considered still to be viable and, in addition to that, we had a variation of that. So we had two viable alternatives at that point in time.

The October meeting also generated within the technical working group a list of action items that various of the technical working group members went off and did some additional research. One of the things we recognized was that the original old LSS functional requirements that described the mainframe-type system with lots of functionality, being able to deliver print documents on request and those sorts of things, did not apply to web-based approach to accessing everybody's information. So -- I'm sorry. So we identified a task that somebody needed to take an initial cut at developing a set of functional requirements that would reflect the attributes of a web-based system. We looked at the bibliographic headers and tried to identify whether the old LSS bibliographic header structure would require any changes and as a result of using a web-based technology. And generally speaking, the structure data in the index as originally outlined by the licensing support system, technical working groups with Field and Dickerson and a number of other participants from DOE, we found that the bibliographic  $^{
m L}$  headers were still generally good in terms of creating a format for structured data. One of the observations we had was that there were housekeeping fields of information back in the old LSS design that

1 probably were no longer operative. Those housekeeping fields identified 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

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who originally indexed the document and when the document was placed on the participant's site or submitted by the participant to the LSS administrator. And some of those housekeeping fields of information we felt could be dispensed with. We also identified that we needed to come up with at least some ballpark pricing for the viable alternatives, and we recognized at that point in time that what we were trying to do was to characterize the general costs associated with the alternatives. And my interest was to look at that specifically and make sure that there was nothing in the profile of any of those solutions that would make it become cost prohibitive to the Nuclear Regulatory Commission because that would certain be an issue that needs to be raised to people's attention. It's a perfectly good technical solution but it may not get funded. And if that was going to be the case, we wanted to know. So we did what we called a general cost characterization for each of the systems.

We also looked at portal software to determine whether or not these could be the hardware -- whether they could be operating in multiple different operating systems and that assignment was tasked off to Nuclear Regulatory Commission. We also explored the applicability of data mining tools and went also back to look at implementations of other portal sites that looked like good candidate, best practices sorts of sites that we could look at and we did go back and talk with the folks from DOE's Environmental Safety and Office of Environmental Safety and Health and got a lot of good information about their experience with developing their portal site for the Department of Energy. And finally we also recognized that we needed to continue doing some work on the issue of records packages and other issues that were associated with that. So the October meeting was pretty busy. We had a lot of these action items and a lot of the results of that are going -- are included

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in the packets that have been provided for you.

The technical working group convened again in December on December 5<sup>th</sup>. And, at that point in time, we worked toward trying to develop a better definition of the mission of the system and, Steve, again -- I think -- no that's the right chart. Again, this kind of goes back to Steve's question this morning, exactly how do you view the mission of what the system is supposed to accomplish. And, in essence, we honed it down to ensuring that there was a web-based system that would provide all of the documents uniformly to all of the potential parties. The rule still requires a certain amount of independent validation that the participants are adhering to the rule and, in terms of making sure that the system is available to assist in meeting the three-year license proceeding, there's also the aspect that the system -- we need to ensure that the system is up and operational and available for the parties when it needs to be there.

At the December meeting, we also defined the key attributes of the system, including elements dealing with how controllable the system would be and control from this perspective means can we ensure that when users come to that site, the users can get into the website, that there's enough band width to the site and enough licenses for concurrent users coming into the site so that we would not have people being blocked out of having access simply because there were not enough resources made available. And part of the LSN administrator's responsibility is to ensure that the system is available when it needs to be available.

We also identified that the key attribute of the system

would be to try to ensure the highest degree of performance and the

highest amount of availability at the most reasonable cost. And again,

that's why we went into the drill of doing cost characterizations on the

various scenarios. During the December meeting, a fifth solution was

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proposed. Again, the technical folks from the Department of Energy were particularly helpful in brainstorming sessions that we had. The fifth solution that was proposed was again another architectural variation of alternative three. So we ended up at the end of the December meeting with now five technical solutions or architectures and the three that we considered still to be viable all really had very similar aspects because they were all just variations of that original alternative number three. They add some architectural features intended to deal with issues that we identified, performance issues, that all related to band width and access and the ability to download fairly large documents. So that is one of the issues also that really developed out of the December meeting was to focus on the issue of band width and that being the -- one of the primary technical challenges to making -- to establishing the system and making it operational and reliable.

I have some additional things to report on. One of the assignments that we had from the last advisory panel meeting was to go out and establish some dialog with library organizations within the state of Nevada. This all came up on the context of the discussion I believe about the Nuclear Regulatory Commission was just in the process of disestablishing its local public document rooms. And Judy did I believe at the last ARP meeting raise the issue of -- I'm not sure if -- I can't remember -- in any event, somebody at the last ARP meeting raised the issue of --

MR. HOYLE: Abbie I think.

MR. GRASER: Was it Abbie? Okay.

MR. HOYLE: Abbie Johnson.

MR. GRASER: Okay. Somebody raised the issue of whether or L not the public that was located in some of the areas outside of the metropolitan areas, for example, would have adequate and sufficient S L computer resources to be able to access the system. And so one of the

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tasks that I took on was to go out and make contact with the state of Nevada Library and Archives Organization and I'm sharing with you here on this slide a communication from Bonnie Buckley. Basically she indicates that all of the public library systems in the state right down to the smallest local branches in all of the out county areas do currently have Internet access, and the Internet access is one of the big initiatives within their organization to make sure that that Internet access is available through the library organization. So I think the short answer on all this is that if there is a library close by, members of the public will have a mechanism to get into the document collections and I -- at their website, they have also included a list of those libraries and the various branch offices of them. So if anybody is interested in pursuing that, I'd be glad to share with you the website for their organization. And just like to go on record as thanking Ms. Buckley for her prompt response to that inquiry that I sent out to her.

MR. MURPHY: That's pretty much true around the country today, isn't it, Dan? I know we have in our local library back home, and I think throughout the state of Washington, they all have Internet access. There's a question of, you know, how many counsels are available, et cetera, but --

MR. GRASER: I believe that's a fair characterization of it.

It's just not the sort of thing that I would like to shrug off and leave to a presumption it was an easy thing to check out and easy thing to document that yes indeed the availability is there. There was some concern I believe that Abbie raised regarding the availability, for example, of fast telecommunication lines, dedicated telecommunication

L lines which could also affect performance. So it's just as easy to ask those questions and to find out and to get it onto the record that yes indeed those resources are available.

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MR. MURPHY: Well, you know, the reason I raised the point is that there are people elsewhere in the country who are going to be just as interested in this process as -- it's not just the folks in Nevada or in Nye County who might want to access those sites and participate.

MR. GRASER: Oh, absolutely. And I think you could probably make the case that if an individual has a local community college, library, or university library, or some other place where they can get access without having to have a computer terminal of their own at home, that information is going to be generally available, and I agree with you, Mal, that when you look at it from the scientific point of view, for example, there are lots of people who are very much interested in the science that's going on. Geologist who are interested in the geology aspect simply because this is the most geologically studied site, so you may have academic organizations who are going to be following what's going on here simply because their discipline is getting a much more intensive body of knowledge made available to them. So, yeah, I think the general public and some academic disciplines will be following this with great interest.

MR. HOYLE: Jason?

MR. PITTS: Yeah, Dan. The only thing I'm concerned about is that the public libraries in the north that I'm aware of have dial-up access.

MR. GRASER: Okay.

MR. PITTS: I think there could be some concerns about speed and feasibility of the system, you know, with large documents and stuff like that.

MR. GRASER: Yes.

MR. PITTS: We've had some issues with the -- some of the things we had to deal with -- a lot of it and it takes some time with

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dial-up speeds.

MR. GRASER: That's an excellent point, and I think if you go to the web page that they have listed here, the dmla.clan.live.nv.us website, if I recall, there was a section in there on dealing with their overall policy and their overall initiatives for fiscal year 2000 and 2001 and they do mention, if I recall correctly, they do mention the fact that they want to increase the capability to get people beyond the dial-up mode. So that is on their horizon as some of the things that they're looking toward.

MR. PITTS: I think one of the things that the portal site might be able to do is -- and I've seen it in some of the other government sites, is displaying times -- look at these documents, expect these documents -- idea of what they're dealing with when they're going in to research these topics.

MR. GRASER: Yes.

MR. HOYLE: Chip?

MR. CAMERON: Dan, one of the things that I hope that you could address when we go through the alternatives is what are the implications of the different alternatives for the public access functionality? In other words, are -- do some of them make public access easier or are they all neutral? This sort of follows on Jason's comment and on something that John reminded me of which was when we were going to have the centralized system, we were going to do training for people in terms of using the system and I would hope that under this new configuration that it would be as user friendly as possible. And that's something that I guess you guys were considering when you looked at the alternatives.

MR. GRASER: Yes. I think for all five of the alternatives we did the -- we did a fairly thorough job of trying to characterize how a user would connect to that system and what the user interface would

look like. And, in fact, the two of the early alternatives that the technical working group looked at and we were not particularly enamored with, but the characterization of them was, in the first case, going to a site like Yahoo and being able to simply enter a search term and have the world disgorged in front of you where the use interface is a lot like what everybody's little sixth grader at home is currently able to use. And, you know, I don't mean that in a negative way. I mean, it's really the current state of technology.

The second user interface that we looked at again had a relatively simplistic user interface where you type in key words or terms that you're searching for, and essentially what that one did was launch against multiple collections and did a better job of interleaving the results that you would get back from the search. So instead of having them all displayed in one huge page such as you would with Yahoo, if there were 10 different participant databases, you would get 10 sets of results brought back and interleaved or perhaps aggregated into here's the DOE collection or the NRC collection. But when we go through the discussion this afternoon we will get into that in more detail because we did do those characterizations.

But in general, the user interface for all of the scenarios that we examined, you know, one of the primary things that we were looking at was how can we keep it simple yet powerful enough to find specific materials in a fairly large collection. And that's where the Yahoo approach could fall apart. If you have only one or two search terms, you will consistently get back the entire collection on every search.

MR. HOYLE: Dan, let me stop you there for a second. We  $^{
m L}$  have another panel member who has joined us. Abbie, would you introduce yourself please.

MS. JOHNSON: My name is Abbie Johnson and I represent

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MR. HOYLE: All right. Thank you. You came in at a good time. Dan was just talking about the information he had gotten about libraries. And I was thinking about people that -- of the type that you talked about who don't perhaps have telephones at this point who do have a library to go to, but new users of new technology like computers are very, very tentative users, and seems to me, if they are interested in these collections, they are going to need some help from the librarians and hopefully they themselves are well trained on how to assist a new user on the machine.

Dan, are you going to continue on your -- some other charts?

MR. GRASER: Yes, I had --

MR. BECHTEL: Just one other --

MR. GRASER: Okay, go ahead, Dennis.

MR. BECHTEL: See the public access, I would echo Chip's request to maybe dig into a little more detail on the practicality of public access because I know -- I mean, Internet is available on most libraries, but libraries have different types of computers. Sometimes they put time restrictions on the availability of use. You have to sign up for it. One of the libraries even in Clark County, there are 386s that, you know, you put the request in and go have lunch and then come back and, you know, you may get a response. But there's a lot of other, you know, practical things that need to be considered about, you know, the public, you know, access even something that's available, so --

MR. HOYLE: Okay. I'm trying to put that in the context of some of the comments that were -- the introductory comments that were made this morning. And trying to frame that for myself a little bit better. If you're suggesting that we go out and try to do a little more background investigation on the capabilities that are currently out there, whether the libraries have relatively, as you say, relatively

slow machines with dial-up access and so forth, if I find out that the answer is yes indeed in some of the outlying counties that, in fact, is the case, then the follow-on question becomes now what do we do about it and what would the strategy be and is that something that the advisory panel would like the LSN administrator to pursue or is that something where again we go back to perhaps the Nevada State Library and Archives people and engage in a deeper dialog with them. So my -- the thing I'm looking for, Dennis, is to try to characterize, if we find out that that -- that the public still have adequate but not really outstanding access, then what do we do about it, and that's what I would need to know, what direction should I go in with that.

MR. BECHTEL: I think prior to the finalization of rule, I think we agreed it should be an open system. And merely I'm pointing out is that, you know, in order to -- it's an item we need to discuss but there are practical things that may make that difficult for the public to participate.

MR. HOYLE: Uh-huh.

MR. BECHTEL: It's an issue that needs to be --

MS. NEWBURY: It's Claudia. I wonder where the line is drawn between making things accessible and going beyond the concept of what an LSN is. Is this -- is your response time so critical for the general public that you need to consider that in how it is you're developing your system. Because I can see you ending up with the -- back where we were with an LSS and you provide a terminal and a high-speed line, and I don't know that that's where you want to go.

MR. HOYLE: Uh-huh.

MS. NEWBURY: So you as the NRC need to decide where you  $^{
m L}$  want your system to be and how it is you want it to act.

MR. PITTS: And the question has to be is it adequate? I mean, that's what I'm saying -- is it going to take 30 minutes to

download -- you know, is that too long to wait to do real research? I don't know. That's really the question.

MR. HOYLE: Jason, for a member of the public as opposed to a participant?

MR. PITTS: Yeah.

MR. HOYLE: Okay. I think that's a good point and, you know, we're moving here from a paper system where members of the public would have to, you know, take large documents and physically off a shelf and page through them and read them and find what they want versus trying to do that very tentatively perhaps at first on a computer. I think the Nuclear Regulatory Commission would be interested in your comments, your thoughts on this subject. I don't think that we as a panel need to develop a position to advise the LSS administrator on how he should go about handling this matter. But as far as an item of interest to the commission, I think this is clearly one of those items. Is there any other comment? All right, Dan.

MR. GRASER: Okay. I would like to finish off this last topic here before we take a break, and that is to report back on the functional requirements and the work that's being done in that regard. Mentioned earlier that the technical working group looked at the original licensing support system level one and level two functional requirements that had been developed, oh, I think back in the 1996 time frame. And those, in fact, were iterations on a set of functional requirements that were developed even earlier back in the 1990 through 1992 time frame. And I mentioned that the functional requirements for the old licensing support system had everybody's wish list included in them. And those wish list items included calling out functionality for being able to submit a request to the licensing support system administrator for print jobs to be run on very large paper -- very large I numbers of documents, very large number of pages where an individual

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would be able to submit a request and a high-speed printer would duplicate the documents and ship them out to the requesting party. And it had other aspects of mainframe-type functionality, mainframe administrative aspects to the system. And all those functional requirements when we looked at them we realized, well, this has certainly a different flavor when you look at the -- at making this a web of underlying collections of other people's materials that they are still maintaining under their own systems, under their own possession. So the functional requirements, we took it upon an NRC task to go back and we -- instead of trying to resort all of those old functional requirements which we tried to do initially and it turned out to be very cumbersome, we just went back to the drawing board and tried to characterize a core group of functional requirements for the system. Those 48 functional requirements were then augmented by all sorts of discussion factors and attributes that had been verbally expressed or expressed in some of the earlier LSS functional requirements. And we put all of that commentary with the functional requirement that described a web-based system.

The function requirements went out to the technical working group for their review rather late in my calendar here and we did have some opportunity for feedback and some opportunity for comment. Those have been incorporated in a version of the functional requirements that are included with your handout packets here. I want to be clear that the technical working group has not sat down and expressed any sort of consensus opinion that these are the functional requirements or should be the functional requirements or that they cannot be improved upon or that they should not be worked on additionally to include things like  $^{
m L}$  performance characteristics of the system, how quickly does it need to respond to user requests and how quickly should it be capable of being recovered and so forth. So I want to make sure you all understand that

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this is still a work in process -- in progress and does not represent any sort of a consensus recommendation of the technical working groups, but we did want to bring it forward at this meeting in order to let the ARP know that there's still a fair amount of work that would need to be done on the functional requirements in order to correctly characterize what the web-based solution is intended to do. And if, in fact, we go back and look at alternatives one and alternatives two and say maybe we should be going back to having a simpler world and a simpler system, those functional requirements may get scrubbed back down to a much shorter list because those two alternatives that the technical working group did not pursue would result in a simpler system, okay. So all I'm saying is if the ARP does come back and say, "Well, we like scenario two, alternative two much better," the functional requirements may contract even further to reflect what the ARP opinion is, okay.

But we did want to show that some progress had been made on the functional requirements and we did want to represent to you that, when the ARP comes back and gives NRC its sense of direction, that the functional requirements will probably need to be revisited again. The technical working group may not need to meet face to face on these but we would certainly, at a minimum, be doing a lot more e-mail exchanging back and forth to get closure on the functional requirements. But I think, as I said, I did want to report on the status of that to the ARP and just let you know we had been working on it.

At this point, John, unless anybody has any additional questions on any of the activities of the technical working group or also if any of the members of the technical working group who are sitting in the audience right now, if any of you would like to add anything to my report on the October or December minutes, feel free to come up and grab a microphone and make any clarifications or expansions or corrections. But if nobody has any additional comments at this

point, we can go ahead and move toward taking a break.

MS. NEWBURY: Dan, I've got a couple question on one of your slides.

MR. GRASER: Okay. Go ahead, Claudia.

MS. NEWBURY: On your slide seven.

MR. GRASER: Okay.

MS. NEWBURY: What do you mean by providing all documents uniformly, what does uniformly mean?

MR. GRASER: Well, providing documents in a uniform way implies that the significant attribute of the licensing support network software portal interface would be that any user can come to one site and use one interface, learn one set of commands, follow one set of instructions to run a query against any participant's database without having to learn the underlying search and retrieval software or the underlying organization of a document that may vary from one participant's site to another participant's site to another participant's site. So the aspect of providing the documents in a uniform manner is that there's one search interface where you enter your search and there's one display interface where the documents come back and are presented to the user, okay. So that's what we were talking about there.

MS. NEWBURY: So it's -- basically you've already decided that you want a portal-type single --

MR. GRASER: It doesn't -- it does not necessarily need to be portal. The concept was that there would be a single place to go to be able to execute your searches.

MS. NEWBURY: I just wanted to clarify -- so this is what L your perception is, that -- it's kind of in contrast with our discussions earlier that said that all five options were open for S I discussion because it presupposes that you're going to use not one or

1 two but three, four, or five. 2 MR. GRASER: No, you --3 MS. NEWBURY: Actually that wasn't my original question. My 4 original question was leading to do you expect all of the documents to 5 look the same? And I guess the answer to that part is no. 6 MR. GRASER: No, no, no. Well, only insofar as if we have 7 all already agreed that we're going to use, you know, TIFF image or PDF 8 image as a standard. But in terms of the documents looking the same, 9 the answer is no. 10 MS. NEWBURY: So you are telling us what kind of formats 11 we're going to have to use? 12 MR. GRASER: Yeah. 13 MS. NEWBURY: You said TIFF or PDF? 14 MR. GRASER: Yes. 15 MS. NEWBURY: Okay. I'm not sure that I'm -- I have to talk 16 to my technical people and see what that's going to cost us. 17 Also, you said focus on bandwidth as an important 18 consideration. We had that conversation before. It's on the same 19 slide. Bandwidth on your end, or bandwidth on the --20 MR. GRASER: Well, okay, before you move to bandwidth, I 21 just -- I lost my train of thought. 22 MS. NEWBURY: TIFF and PDF. 23 MR. GRASER: It'll come back to me. 24 MS. NEWBURY: We were on TIFF and PDF. 25 MR. GRASER: No, no, no. It'll come back to me. I'm sorry, go ahead, move forward. MS. NEWBURY: Okay. The bandwidth. R: MR. GRASER: -- on the bandwidth issue.  $\mathbf{E}$ MS. NEWBURY: Is the bandwidth your concern on the user side or on the provider side, on your end?

MR. GRASER: The bandwidth issue that we are looking at is essentially the bandwidth as it would be viewed by a user coming into a central location. Ah, that was my point. I remembered it now.

Actually, all five of the scenarios, even the first two that we looked at, all five of those scenarios provide what you could characterize as a uniform interface.

The distinction simply being that you don't have to learn a search and retrieval software package at the DOE site and then learn a separate search and retrieval package at the NRC site, and then another one at somebody else's site, and another one at another participant's site. So all five of those alternatives meet that requirement that would allow the user to come to a single place, execute a search, and have it go out to collections and returning results.

In terms of the bandwidth, getting back to the second question. The focus I think that we were all looking at is how do -- how does bandwidth affect the user. So it is really not so much a question of bandwidth from a site to the portal. It deals much more with bandwidth from where the document text or image file is stored back to the user.

Because in the portal solutions, the underlying store, for example, in alternative four, if everybody had a collection of their materials in a local area network environment and a user came in to the portal site, it really is an issue of bandwidth from the portal site back to the user. Because it's in a local area network, fetching the underlying files is not a band -- not necessarily a bandwidth issue.

In alternative three, for example, bandwidth from a user to the portal is relatively low. But because the underlying documents are I still reposing on a participant's machine, when the portal sends a request out to deliver that file back to the requester, that's when the I size of the bandwidth from a participant site back out through the

ANI RIII EY & ASI OCI Internet. That's where that could become a significant issue in terms of the ability to deliver out a large number of files, very large file and image files.

So depending on the architecture, where the bandwidth becomes an issue is different in each of the scenarios. And I think when Glen gives the technical presentations later today he'll get into that in much more detail.

MS. NEWBURY: Okay. Thanks.

MR. HOYLE: Jason.

MR. PITTS: Is your -- are your graphics stored in TIFF

MR. MURPHY: I can't hear you again.

MR. PITTS: Are your graphics stored in TIFF format?

MR. GRASER: Are DOE's graphics?

MR. PITTS: Yeah.

MR. GRASER: Yeah.

MS. NEWBURY: It depends on the graphic, yes. Some of them are in TIFF format.

MR. PITTS: Right. But are any of them that are available on the web, are any --

MS. NEWBURY: Yes.

MR. PITTS: -- of those?

MS. NEWBURY: Yes.

MR. PITTS: Really.

MS. NEWBURY: Yes.

MR. PITTS: And so the user has to have another software package to look at them; is that correct? I mean my understanding is  $^{
m L}$  that Netscape and Internet Explorer can display JPEG's or GIF's, couple other formats, PDF being one of them.

MS. NEWBURY: I can look at my TIFF images at home and it's

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because I installed the free shareware --

MR. PITTS: Okay.

MS. NEWBURY: -- thing called ACDC.

MR. PITTS: Okay. So just my ignorance, did the technical working group look at the other formats, like GIF and JPEG versus TIFF for graphic display?

MR. GRASER: Yes. And as a matter of fact, the whole issue of standards did come up during the course of the discussions on the functional requirements. And I'm drawing a blank right now. My mind is focusing on a break, but --

MR. PITTS: Okay. I can wait till later on.

MR. GRASER: We did address that issue, especially in terms of trying to be a little forward looking and anticipate what would be happening if participants had full motion video files, for example, or audio type files, and the potential for having to deal with them in the system. And from the portal's point of view, those are just object files that are sitting out there. They can be delivered back to a user's desktop.

Now if you send a file back out through the Internet and it comes to my desktop and I pull the file up, I may not have a sound card. And that's my own shortcoming. I can't listen to the sounds associated with that file. And so that's where it comes back to the issue of depends on the participant, depends on what kind of computer they have.

And in terms of identifying the standard formats, NRC's internal document management system, again, will accept just about any sort of object file, and has viewers and plug-ins that will allow its internal system to pull up all sorts of files. Even though NRC says N L well, we would prefer PDF file, we would also take a TIFF image, because we have plug-ins and viewers that can view a TIFF image right now.

TIFF images happen to cause a little bit of a different

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problem in bibliographic cataloging because of the way the NRC document system treats them right now, is it TIFF single or TIFF multi. There are some issues associated with that that they're trying to work out right now. But generally, I mean back, even back since the early days of the LSS, people have been saying TIFF is a format that you can be reasonably sure that systems in the future will be able to use that. And, you know, a lot of people already have their documents in TIFF image.

MR. HOYLE: All right. Unless there's further comment, I will call for a break. But before I do that, I would like to thank the 20 or so representatives who participated and assisted the technical working group in its activities. I know many of you are in the audience, and I just wanted to thank you for myself and for the members of the panel. So let's take a 15 minute break.

[Recess.]

MR. HOYLE: Okay. We're back in session.

Dan, how about you picking up where you left off please.

MR. GRASER: Okay. I had just a couple of things that we should have dealt with in housekeeping when we started the meeting this morning.

For the panel members, we handed out three-ring binders at the last ARP meeting. And you're probably wondering about the tabbing that was used on the current set of handouts. The current set of handouts are tabbed such that you can take the materials from today's meeting and add them right into the three-ring binder behind the materials for the previous meeting. And you'll notice that the cover pages, we've provided a new cover page for the three-ring binders, a nice piece of cardboard that indicates that the binder now contains materials from both the October and the February ARP meetings.

We also have, for the ARP members who may not have been at

the previous meetings, we have still five or six of the three-ring binders from the previous meeting. So that if you would like to have a bindered set, we still have some additional copies available.

The -- before we move into the next session on the discussion of the alternatives, I'd just like to bring in to your attention that the overheads that we prepared really focused on alternatives three, four, and five, and reflect that we were going to focus on that. We did a little bit of re-coordination during the break. And Glen Foster, who's our contractor, is prepared to address alternatives one and two as well in the context.

So there will be some overheads that used to be an appendix to the overheads that are now going to move up in the presentation, and we will walk through the alternative one, two, three, four, and five in sequence. We did not prepare schematics for what alternatives one and two look like, but all of the other write-ups on the attributes of those systems is going to be presented.

So before we move into that, I just wanted to open one more time if there were any questions that anybody had that came up during the break that somebody would like to raise right now. We could entertain additional questions before we move into presenting the technical scenarios.

MS. NEWBURY: Dan, I told you I was going to ask the question, and I think it kind a is helpful before we get into these particular scenarios, and that is the options all focus on the discovery part of the LSN rule. And I understand you're planning to use ADAMS for the actual docketing and licensing process, and I wondered how these fit together and how ADAMS would be used.

MR. GRASER: Okay. Yes. Let me explain to everybody who may not be familiar. The Nuclear Regulatory Commission is in the throes or in the process right now of deploying an internal document and

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24 25 records management system, and the acronym for that is ADAMS, A-D-A-M-S. Stands for Automated Document and Access Management System. It's an initiative that NRC's been working on for the last three or four years. And essentially what it does is it moves NRC off of some old Oracle and Data General technologies that could never be made year 2K compliant.

In the process of introducing these new tools to the Nuclear Regulatory Commission, various offices at NRC are charged with the responsibility of using that new technology to do their business. Some of the business that gets normally done within NRC is the process of establishing docket files for the various licensing activities that are before the organizations within NRC.

The SECCY organization is responsible for being the gatekeepers of docketing materials that come into the Nuclear Regulatory Commission. And in that capacity, they maintain docket files of materials associated with various cases, various docket numbers. And SECCY is in the process of establishing docket files in the ADAMS environment.

So in that regard, the docket for the proceeding for licensing a high level waste repository or hearing a license application for a repository, that docket would normally be established by SECCY. And it would be set up and established just as any other case docket file would be set up within the Nuclear Regulatory Commission.

ADAMS is structured so that there's an internal component of the system. And for any of the documents that are residing in the internal component of the system that are also identified as publicly available records, those materials get replicated and placed on an external server outside the NRC firewall which is web accessible to the public.

Currently, that external collection requires potential users to download an additional piece of software called CITRIC, which is

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turning out to be somewhat problematic for lots of users. And NRC's office of the chief information officer is in the process right now of re-examining the use of that CITRIC software. So I think in the long term, we can anticipate that there will be some other sort of software environment to enable the public to more easily access the public collections.

Now for the, you know, for this particular licensing action again, the docket will be established internally within ADAMS. And so in that regard, any of the documents that are going to be submitted to the docket will need to come into the Nuclear Regulatory Commission and be added to that ADAMS internal docket. As I mentioned earlier, ADAMS can store all sorts of different file formats. It can store Microsoft Word, it can store WordPerfect, TIFF, GIF, and any sort of file.

The ADAMS docket -- and how that will be populated, okay, is essentially a procedural process, the way I'm viewing it right now, in that the -- anybody who wants to submit materials can use a component of the ADAMS system to electronically or digitally sign a document and place it on an NRC external server. And somebody from the SECCY organization will then reach into that server, grab the file, and say aha, this belongs in the Yucca Mountain docket. And they will enter that file into the ADAMS system, and they will assign the docket case number or docket number and the rest of the identifying information with the document that's being submitted into the docket.

And as I said, that's essentially procedural. The ADAMS database is there, and the capability to do electronic exchange of electronically signed documents is operational. And it's working now for one or two different document types, and we are gradually expanding the number of document type or file types that can be transported through that mechanism. But that capability is currently being piloted within ASLBP on a current case right now, and Paul Bollwerk is using

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that process in one of the licensing actions before the ASLBP.

So we anticipate that by the time the LSN is ready to become operational, the -- we will be able to utilize the ADAMS docket. We hope to have a better interface for the public getting into that docket; and we expect to have a fully functional electronic information exchange capability, that if you just follow step-by-step directions you can take documents, plant them on the server, and somebody from NRC will come get them and the process essentially works in reverse.

That process would be used for motions practice. Somebody submits a request, presiding officer gives an answer back, and you could use that process similarly to take internal NRC materials, put them on that server, and then participants can come to the server and pull down versions of those materials as well coming from the other direction. The electronic signaturing software and capability is available at no cost. It's a downloadable set of software that can be found right at the NRC home page.

In terms of how all of the system would hang together from a visibility point of view, from the user's point of view, is if we established a portal page, in addition to having a search and retrieval screen you could also have hot links right on the LSN portal page. Click on a hot link and it will take you to the ADAMS docket. Okay? Click on the -- another icon on that page and it will take you to the page where you get the instructions how to use the EIE, electronic information exchange process to get documents into or back from the Nuclear Regulatory Commission.

So that portal page could have icons or hot links pointing you directly to other resources that a user, any class of user, might  $^{
m L}$  want to invoke as part of the total process. So that's how it would all hang together. It isn't as if we would be doing any additional level of software customization. What we would be attempting to do is in one

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place, one stop, the portal site, is give people the links directly to already existing capabilities. That's the short answer.

MS. NEWBURY: Okay. So you see -- for you, that is kind a short actually. Sorry.

So you see ADAMS as fulfilling the requirements in Section 2.1013, use of the electronic docket during proceedings?

MR. GRASER: Yes.

MS. NEWBURY: Okay.

MR. GRASER: Now --

MS. NEWBURY: Are you going to designate ADAMS as that part of this rule, or something?

MR. GRASER: I don't think I'm in a position to designate anything as part of the rule. I'm just saying there's an existing resource out there that theoretically does not need to be reinvented.

Now let's say we get to the time frame 2001, 2002 and people are actually using the system. And let's say for the sake of argument that NRC still has not been able to establish a smoother, cooler, quieter, longer type of user interface. Okay? And they're still experiencing problems with users being able to access the ADAMS docket. In some of the scenarios, alternatives three, four, and five, for example, the portal software, in addition to targeting evidentiary document collections, could be told that we also want you to go into the docket file that's in ADAMS and build an index to that, and pull down the text documents that you find in that directory area, and pull down the images you find in that directory area, and put them in a cache storage area right on the ADAMS -- on the LSN portal site.

And in that regard, then it becomes just another target

L collection, but instead of living in ADAMS it's also resident on the LSN

portal machine. And it could be routinely web crawled and the indexes

I updated, just as all of the target evidentiary collections are. So it

would, in essence, be a mirror image of the docket file that was found in ADAMS.

And if ADAMS, as I said, if the interface proves to continue to be problematic, then there is a fallback position that shouldn't be all that costly to be able to make it part of the portal page as well. So as quickly as you can get into the portal page, you can pop open files and those files are sitting right in the memory, right on the portal server. Okay?

That's only a fallback position. That is not reflected in any of the technical working group discussions and it was not reflected in any of the pricing that we did, but I'm just trying to think ahead and anticipate, and I had that little ace card in my hip pocket, so thought I'd throw it out.

Are there any other questions?

No. Okay. Going to spend the next few minutes giving you a very quick overview of the alternatives. And this is where I'm going to change a little -- start changing here a little bit our intended sequence of presentation. In the overview of alternatives we, as I said earlier today couple a times, we had three initial strategies that were presented at the October meeting. And we characterized them during the October meeting as a simplified, a moderate, and a portal strategy.

Simplified strategy was really just that. It was just a question of establishing a web page someplace on the Internet. And at that web page, all you would have would be a series of hot links into everybody else's external web collections. And from that page, you would click the link and go directly to the DOE site, or the NRC site, or the State of Nevada site. When the user got to that site, the user N would then have to negotiate or navigate with the software that was being used at that site. And there's no effort made to try to weave I together any of the sites.

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So if a user came to the LSN home page in this scenario and wanted to search across all of the participant collections to find any document mentioning a certain aspect, hydrology, for example, the user would then have to follow each link out to each participant's site collection and to interact with whatever software was available on that site and run that search. If there are 10 participants, 10 sites, 10 searches, 10, potentially 10 different sets of software and 10 different user interfaces that you would have to negotiate if you wanted to search across everybody's collection.

So it really is a very simplified method of simply pointing you to where the collections are located and saying hasta la vista, you're on your own. When you go to the participant's site you have to negotiate and interact with whatever software you find on that site.

Okay?

That was -- when we looked at that we said for the general user, the general public coming in, that approach, requiring a user to negotiate successfully with that potentially large number of different software packages, that really made that a very non-user friendly type environment. Especially when you're in the process of trying to prepare your case, trying to prepare your materials, trying to pull together exhibit materials and so forth. You would have to negotiate those separately.

And it also meant that you're starting to raise the level of technical experience that would be necessary if you had paralegals or some other sort of administrative assistant that was going out there to try to pull together information. You're starting to place an additional skill level upon the people who would be doing that sort of N searching, because they need to be fairly knowledgeable with a wider range of tools that everybody's using. And so that's when the technical working group looked at that and said that that's not particularly

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friendly to the general public type of user.

MR. MURPHY: Dan, let me interrupt you right now. If you recall back to the October meeting, I had the -- I was bouncing back and forth between an ACNW meeting in which I was a panel participant and this meeting. And so I missed a lot of the October ARP meeting, and the December technical working group meeting I didn't participate in at all, but I don't understand why that's such a problem to any participant. And it seems to me that is precisely, what you just described is precisely what we envisioned in our discussions prior to our recommendation to the NRC about, you know, rewriting the LSS rule and turning it into a web-based LS, licensing support network.

And secondly, I guess I just don't see the problem associated with participants having to go through the steps that you just explained. That is the worldwide web. If you want to buy a Dodge on the worldwide web right now you have to navigate with certain, you know, various kinds of software. And people are doing it. And lots of people are getting extraordinarily rich in making that kind of software and process available to the public. I mean what is the problem in requiring that to be done?

The other point I think we have to keep in mind is that the non-federal participants in this process, and I include even the State and Nye County in that, are going to have comparatively very small number of documents that people are going to need to take a look at in this process, people who have not been involved in the process prior to now. I mean most of the searching is going to be done on DOE's web site. Ninety-five percent of the searching is going to be done on DOE's web site. Maybe a little less than that. You know, the NRC also. And why we ought to -- why the smaller participants ought to go -- be required to go through the same, you know, to have the same sort of complicated or more complicated system as the DOE is -- I just don't

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understand.

And as far as those of us who have been in this process for some considerable number of years, I mean good gosh, we're going to know how to do this in any case. I mean it seems to me that you're discarding that so quickly has the potential at least of placing unnecessary burdens on the smaller governmental participants, and on Judy Treichel's people and similar organizations who are going to come later into this process for what I can't figure out is any good reason.

And I guess my final point is so some expertise is going to be required. Tough. People are going to have to learn how to use the system. In the case of Claudia's lawyers, she's going to be paying those suckers 400 bucks an hour. I'm not going to lose any sleep if they're required to do some work for that money, just a little.

MS. NEWBURY: It's good to hear.

MR. FRISHMAN: And I'll follow with that, because you say, you know, 10 potential. Well, in reality, we're only talking maybe 3 or 4.

MR. MURPHY: Right. Exactly. Good point.

MR. FRISHMAN: And the only place where I can see that it would be useful to have some integration is to make sure that on Claudia's site everything that she's got is at one site, rather than spread over a bunch of labs. And, you know, pull it all into one place and then we do it today, we'll know how to do it tomorrow too.

MR. GRASER: I'll characterize this from the LSN administrator's point of view. This certainly makes my life a whole lot easier.

MR. MURPHY: It does.

MR. GRASER: Okay?

MR. FRISHMAN: Good.

MS. TREICHEL: Well, if it makes your life easier, it

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probably makes people in general, the general public easier as well. And I guess that's part of, and it may seem like nitpicking when we talked earlier about changing the name of this thing, but in fact a lot of the people, the public in Nevada and a lot of others don't support licensing this thing. So they're going to be looking for a Yucca Mountain integrated information or integrated database, or comprehensive database, or any of the things that Steve was talking about. And that you should be able to get through, I would suppose, Web Crawler, Momma, any of those things that the people who really use the web know about and can get to.

But, you know, it's just misleading for people who don't live the same incredibly wonderful life that we do, when you look at our stuff there isn't one mention of Yucca Mountain on here. And that's what people are going to be looking for, and not an attempt to support the licensing of a repository. So --

MR. CAMERON: We can get into the semantics, or not the -- I don't want to minimize it, but we can get into what this should be called at some point. And I don't want to waste everybody's time by going through all of these alternatives, but I don't think that -- I don't think we're going to understand what the pros and cons and tradeoffs are until we go through all of the alternatives. And I'm not suggesting in excruciating detail, but the one thing that the -- that Dan particularly, and NRC, has to keep their eye on is that if this is going to be the discovery system for this very important proceeding, we have to have assurance that the thing is going to work so that later on the whole thing doesn't fall apart because this system is screwed up somehow. And I think that that's what Dan's concern is.

MS. TREICHEL: Well --

 $$\operatorname{MR.}$  FRISHMAN: Isn't it the applicant's responsibility to make sure the system doesn't crater?

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MR. GRASER: I'm sorry?

MR. FRISHMAN: It's the applicant's information that is the most important part of the proceeding. And isn't it the applicant's responsibility to make sure that that information is available to those who are parties and those who are interested? And I don't believe that the NRC really has an obligation to assure that the applicant has the easiest way through life.

MR. CAMERON: Well, no. And I don't think that that's what we're suggesting. Because if you look at the compliance requirements in the rule, DOE, the applicant, may fall short of -- on two points, one, being in substantial compliance with the document identification and submission of requests; and two, having a site that is electronically accessible.

But I don't think that trying to have a system that's going to work is carrying -- necessarily carrying DOE's water for them, but you may find that, I suppose, in some of the alternatives. And I'm just suggesting that maybe we find out.

MR. MURPHY: Well, is it --

MS. NEWBURY: Yeah.

MR. MURPHY: Couple of --

MS. NEWBURY: We should hear.

MR. MURPHY: Okay. Sorry.

MR. FRISHMAN: I want to hear what Claudia has to say.

MS. NEWBURY: One way or another, all of our documents will be available for discovery, you can be assured of that. The options, as I look at them, are, if I let Dan continue and go through some of these, I don't have to pay much of anything and he has to pay it all. And the N to the end of the spectrum, I have to set up the whole thing and pay for it, well, DOE has to pay for it.

So I'd like to look at the options and see what they are in

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terms of sharing the burden of making the information available, and where it is and who's paying. But believe me, any way that we cut this, that all of our stuff will be out there.

MR. FRISHMAN: And I can assure you that we're not going to pay for anything to help the system, because nobody's paying us to do it as it stands right now. And I appreciate your position, that if NRC wants to spend all its money making your life easier, that sure, take it, but I'm not going to pay.

MR. MURPHY: Yeah, I -- you know, I still think we have to keep a, you know, a couple of points in mind. First, that I think maybe Judy had mentioned it, that if it's easiest -- the system that's easiest for the NRC and easiest for the DOE is likely -- and I don't know, you know, we need to talk about it, but to just sort of frame the discussion, that system may very well also be the easiest and simplest for the general public, for everybody. Whether that's true or not, I don't know, but let's, you know, let's keep that in mind.

Secondly, I don't -- it seems to me that there's a danger here of us discounting the sophistication and intelligence of the public in this country. I don't think we should discount the public, I don't care where they are, whether they're out in rural Nye County, or in Esmerelda County, or back in Nebraska, being able to figure out how to use this system. I think they're far more sophisticated than --

MS. TREICHEL: OH, yeah. I'm sure that's true. I get some pretty incredible e-mails.

MR. MURPHY: Sure, sure.

MS. TREICHEL: Have you seen this, have you found this, and -- yeah, yeah.

MR. MURPHY: Yeah. And they're going to be able to figure out how to -- if I can figure out how to use the NRC's docket system, if I'm going to be able to do that, and you -- then believe me, everybody

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is going to be able to do it. Trust me, we're going to have eight year old kids in this system doing it quicker and more efficiently than some of us who are paid to do it.

MR. CAMERON: I --

MR. MURPHY: And one last point, and Steve alluded to it.
But I think we also have to keep in mind that in this entire process the Department of Energy is charged with carrying out a fundamental important national policy. The NRC -- and so if they have to spend a little extra money, say la vie, from my point of view. The NRC is charged with licensing nuclear facilities. That's the reason for their existence, for your existence. If you have to spend a little extra money, say la vie.

Everyone else in this process, well, with the exception of the utilities and NEI, everyone else in this process is not here as a volunteer. Whether we're staunch opponents of the repository as in -- is the case of the State of Nevada; whether we're neutral substantively, as is the case of Nye County; or whether we lie somewhere in between, as is the case with some other participants; none of us wrote to Washington, D.C. and asked for this process to come here.

And so it seems to me that there's almost an obligation of fairness to make sure that everyone else who has been forced somehow to this table not be burdened with -- administratively and monetarily be burdened beyond that which is necessary in order to meet the fundamental goals of the licensing support network. And those are the goals that Steve outlined earlier, and you did Dan, I think accurately, and that is everybody has access to everybody else's documents on a timely basis.

MR. GRASER: Right.

MR. MURPHY: Somehow.

MR. GRASER: Right.

MR. CAMERON: Okay.

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MR. FRISHMAN: Let me just follow very quickly with a question. Of all of what we're going through here and the alternatives that get piled on, piled on, who is the beneficiary? What does it do for all of us?

MR. CAMERON: Well, that's --

MR. FRISHMAN: Or for anybody.

MR. CAMERON: That's a good question. Going back to your comment from before, Steve, I was going to ask Dan if Steve's characterization that these alternatives are really -- the major beneficiary of these alternatives as you go from -- move from one to five is DOE. I mean is that a true statement? I mean I didn't think that it was necessarily true, but I think it needs to --

MR. GRASER: Well --

MR. CAMERON: -- to be answered.

MR. GRASER: It was originally a negotiated rule making.

And so I think everybody that was willing to sit in in the process of doing the original negotiating on the LSS rule back in the late 80's is a beneficiary, or at least was perceived as a beneficiary of the system. Otherwise people wouldn't have sat down and participated in negotiating the rule that was going to govern the proceedings. So, you know, I mean I think that's my short answer.

MR. FRISHMAN: Well --

MR. GRASER: The beneficiaries are the people who perceive themselves as benefitting from being involved in the process, and being able to be involved in the process. And there are some people who will say I don't choose to be involved that deeply, but I still want to be involved. And that's really what we're talking about here, is what's the appropriate level of involvement. And it's something that the participants decide, really.

Like I said, there's no -- you need to understand that if,

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for example, alternative five was selected, the only person's hide that it comes out of is mine, because I'm the one who has to do all of the going before the commission and making the appeal for the funds to support that level of involvement. Nobody else is going to be there at my side making the push to fund that alternative; and nobody else is going to be putting in the amount of time and dollars and effort, you know, that me and my staff would be required to do. So like I said, I don't have any particular vested interest in one solution over the other.

The thing that I was going to comment when all these comments were going back and forth is really if this simplified approach is going to meet your requirements and your expectations, the only thing that I would note from a technical point of view is tell me now and then don't change your mind three years from now, because it will be too late for me to recover. It will be too late for me, three years from now, to turn around and respond to somebody who then says the system is inadequate for support. And I think that's why we're going through this drill now.

And it goes back to what I alluded to this morning. It will be the sense of the advisory review panel in terms of how they communicate their feeling back, you know, to the chairman of the ARP as what they want NRC to do. And that really is almost like saying if you guys want to pursue the simplified strategy, I think it needs to be communicated back to the chairman of the advisory panel that this is the position you're taking. And you understand the downstream ramifications of that and you're prepared to live with that approach, then I don't have any problem at all implementing that. Okay?

So that's, from the technical point of view, if this is the way we go, then this is what I implement, this is what gets put in place, this is what'll be there in the summer of 2001. And if it is

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So you need to go in eyes open and aware; that's the bargain you make and that will be the commitment that, you know, we will -- that is what the system will be. And if that's what people want to live with, that's fine, but you need to understand it'll be much too late downstream to do anything else over and above that, at least from a technical perspective.

MR. FRISHMAN: Well, in all of this is there an element of the commission staff wanting to have the most expensive help it can get, in reviewing the application? Does that factor into this, because it's never been mentioned before?

MR. GRASER: No, that doesn't factor into this at all.

The -- that hasn't been factored into this at all. That's never been raised as an issue to me, Steve.

Okay. If we can just move along here and let me just characterize the, what we called the moderate strategy. To refresh your memories, for those of you who were here in October, the moderate strategy tried to overcome some of the perceived problems with having to go to individual web sites and learn different software packages, and different commands, and so forth.

And it tried to overcome that by establishing a single page where anybody coming into the licensing support network would structure the request for information, and that request for information then goes out to the participant systems so that the user doesn't have to visit however many sites are out there. The software visits those sites, the software grabs the result sets, and the software presents it back at the central search interface.

And when we talked about this in October, we characterized this as something like the meta search engines that you can find on the Internet, such as Momma or Dog Pile, or, you know, some of the packages

that will run out and query multiple different engines, or multiple different sites, and bring back the results and stack them together for you, and allow you to use one search interface and have all of the results report back to you.

But other than that, it doesn't do any additional level of software integration. It just prevents you from having to visit 11 different sites, or 5 different sites, or 3 different sites, however many the number is. It doesn't add any value over and above what you get out of the box.

Another example of that is Search Spaniel, or -- yeah, Search Spaniel, which is another software package that does essentially the same thing.

MR. CAMERON: Is it Search Spaniel?

MR. GRASER: Spaniel, as in arf, arf.

MR. CAMERON: It's not related to the Dog Pile?

MR. GRASER: Well, there's a recurring them here, go fetch, boy, fetch.

MR. MURPHY: A Spaniel, you know, a bird dog sniffing through the bushes --

MR. GRASER: Right.

MR. MURPHY: -- looking for pheasants.

MR. HOYLE: Dan, how would you characterize the simplified? Is that the Yahoo approach?

MR. GRASER: No. Moderate is much more like Yahoo. The simplified is really just like going to an existing web page, like I believe the State of Nevada's web page has URL links to another -- other sources of information. You click on that link and you go off to somebody else's site. And it's really that simple, next to no integration.

Okay. Alternatives three, four, and five, those are the

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alternatives that are all essentially based on web portal software technology, which allows more than just a single central search interface. It does a lot of data normalization.

By "data normalization" we mean if you enter the document date field in one database, and you do it year, year, year, year, slash month, month, slash date, date, and somebody else enters it in a different format, the portal software normalizes all of that header record information. If your title field is 200 characters long maximum but DOE's is 250, it will normalize the structured data to allow for the longest text field. It will normalize the dates so that you can search on one date format and not have to worry about translating it between all the different collections.

So those are common attributes of all of these alternatives three, four, and five, is that for the user, a lot of the structured data gets normalized. And that is what allows you to have a single search user interface screen, single search screen, and that's what allows you to use a standard set of search tools, the Boolean operators, or proximity searching capabilities that allow you to refine your search in greater detail within a collection.

I think alternative two would probably provide you with a core set of those tools, whatever came with the particular search engine that you used to implement alternative number two, but alternatives three, four, and five give you a more robust, more powerful set of tools.

And again, this is the sort of situation that if you're thinking of yourself as a user, you ask what if I keyed in a term, Yucca Mountain hydrology, and suddenly find yourself, in alternative one or alternative two, getting back a very large number of hits, large number of web sites. And you don't know necessarily which is more relevant than the other, and you have a stack of 43,000 documents and about

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MR. GRASER: Okay.

MR. FRISHMAN: But you wouldn't do that in the first place.

MR. FRISHMAN: I was, at the same time you were sort of developing that thought, I was thinking of, you know, how I might use it. And I came up with just one term, and thinking how far it might reach out. And just take something that probably means nothing to most people here, just take the term matrix permeability. That would be something I would search.

MR. GRASER: Right.

MR. FRISHMAN: And it would almost entirely be housed in DOE's stuff. There might be one or two other hits. And so what do I get out of three, four, and five that I don't already have in one or two?

MR. GRASER: Your characterization is correct. And you are, you know, one of the fortunate 500. You're one of the power users who understands that terminology. If this application happens to be living in web space, you will have perhaps thousands of users hitting the web sites with a term, Yucca Mountain hydrology, the day that an article appears in the New York Times or on MSNBC. So for every focused user such as yourself, there is potentially much larger universe of general public who say gee, this came up in my MSNBC screen today. I'm going to search Yucca Mountain hydrology.

And that's when you start swamping the system with a fairly large number of requests which would be satisfied by a large number of documents. And that walks you right into the sort of scenario that causes these denial of service type problems, you getting a lot of Popple hitting the same server with a request that's very resource intensive over and over and over again.

So yes, for every user like you, there's also the potential

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MR. GRASER: I understand that.

MR. FRISHMAN: I don't have to --

MR. GRASER: All I'm asking --

MR. FRISHMAN: I don't have to compete with an awful lot of people to find something that I want on your site, I don't think.

 $$\operatorname{MR.}$  GRASER: And all I'm suggesting is that you look ahead to the day when there is -

MR. FRISHMAN: This program will never be that popular.

MS. NEWBURY: I've actually looked at statistics on our hits on our home page. And when major documents go out such as the EIS or the viability assessment, we do get thousands of hits per day and it does not choke the system. It may slow use a little bit, but that would be about it.

MR. GRASER: It's thousands of individuals all asking for the same document. It's not thousands of individuals asking for thousands of documents.

MR. FRISHMAN: Well, in the licensing proceeding you're not going to have thousands of people asking for the same thing. You might have three or four people asking for the same thing, like matrix permeability, because that's what is current in the proceeding. You're not going to have thousands of people.

MR. GRASER: Okay. Well --

MR. FRISHMAN: And getting in the door is not the problem.

MR. GRASER: Okay. The -- you know, we're actually starting to get down into the technical aspects of the discussion that we were really going to talk more detail as Glen Foster goes through and talks about each of them. I mean there -- yes, there are obviously aspects, as you say, that you will have a perspective on that is not necessarily the same perspective as DOE.

MR. MURPHY: Well, I think Steve's got a good point. And

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Glen should probably address it, but -- and, you know, speaking as a complete novice almost in this area, it seems to me for the denial of service sort of a problem, first of all, we can't build a perfect system.

MR. GRASER: That's correct.

MR. MURPHY: We don't have -- nobody -- congress is never going to give anybody enough money --

MR. GRASER: Right.

MR. MURPHY: -- to build a perfect system. But wasn't the denial of service because -- not because amazon.com received thousands of hits, but because it received millions of hits? Am I misunderstanding? I mean they just got swamped by an just absolutely extraordinary number of hits. And we're --

MR. GRASER: There's a distinction in the type of traffic that Amazon deals with versus the type of traffic that the LSN is going to deal with. Amazon can get millions of requests for relatively short packets of information. And because they're short, and the answer goes back and forth and back and forth and back and forth very quick because they're short packets of information.

We won't get, hopefully, millions of requests, but we may get substantial thousands of requests. And the response coming back from our servers won't be 200 bytes of data, it will be humongous files. And that's the point where the distinction between millions of hits versus thousands of hits seems to be, you know, it doesn't seem like having thousands of hits should be as big a problem as having millions of hits.

MR. MURPHY: I agree with Steve. I -- Dan, I think that is  $^{
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MR. GRASER: Okay.

MR. MURPHY: -- I don't think we ought to spend an awful lot

of time and money designing a system to avoid that. Now the deliberate intrusion, you know, the sabotage to the system is something that needs to be considered, you know, either the denial of service sabotage or the getting in and manipulating the system and dropping bogus documents in there kind of sabotage needs to be considered.

But I just don't think we're going to have, you know, one Sunday after, you know, reading your New York Times in the morning we're going to have 450,000 people in the United States say geez, I really want to read that document, you know, even though it's going to take me 4 hours and 20 minutes to download it. By God, I'm going to give up my Sunday to do it, because that matrix permeability thing really looks interesting to me. That's not going to happen.

MR. FRISHMAN: And didn't I see in the requirement thing, unless I misread it, that you're sort of taking a minimalist approach while you're making the same discussion in the other direction? Didn't -- isn't there somewhere in there that a requirement for a capability to handle 150 simultaneous hits?

MR. GRASER: Yes.

MR. FRISHMAN: Okay. So what are we talking about here?

MR. BECHTEL: I think --

FEMALE VOICE: Go ahead.

MR. BECHTEL: Well, no. I think -- I was somewhat confused in going through the materials, you know, the complexity of the, you know, the alternatives and try to understand which is best. But I think in going through your review of the alternatives, what would be helpful to me is to understand, you know, the, say the down sides of using one and two.

MR. GRASER: Yeah.

MR. BECHTEL: Or three, four, and five, all of those.

MR. GRASER: Okay. And Glen will be covering that --

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MR. BECHTEL: Yeah.

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MR. GRASER: -- in just a couple minutes. If we can --

MR. BECHTEL: Because I know I've kind a -- we've all gone through, you know, a search of the material that I thought I knew and I had difficulty really finding it or end up 10 million hits, and how do I synthesize that. And I don't want to go through that on this. So if there's a simpler way, and if it's alternative five, I don't care. You know, I -- we're not going to be able to --

MR. GRASER: Okay.

MR. BECHTEL: -- add a whole lot resources to the program either, but I, you know.

MR. CAMERON: I think it's important for people also to understand that, Dan, you weren't really pointing out a down side of one and two here in terms of the unfocused user, the general public. You were pointing out a down side for the focused user, because if you don't have the right type of software then all these general public requests could bring the system down; right?

MR. GRASER: Yeah. Yes, I -- yes, that's correct.

MR. CAMERON: And that there may be more examples of that along the way as we go through what Dennis is suggesting we do.

MR. GRASER: There are definitely down sides attributes of all five of the alternatives. And, you know, I think from the technical working group's point of view, we tried not to overly emphasize what the negatives were of any of the alternatives simply because the technical working group didn't vote in favor of any one as being the best. Our, you know, we were chartered to explore the alternatives. The ARP can make up its own mind.

And we tried not to, you know, identify the weaknesses of one versus the other. In fact, I think we deliberately tried to identify the benefits of one of the alternatives versus the other; to

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AN RI EY & AS OC focus on this one gives you this much more, this one gives you that much more, this one compensates for a problem, perceived problem here or a perceived problem there. But as I said, Glen is really going to walk through in that much more detail on all of those.

The -- in order for me to wrap this up here so we can continue to move along, the only other comment I'd like to make on alternatives three, four, and five is just to leave you again with an understanding that the way they differ, they have common elements, common attributes in the single user interface that's presented to everybody, but the way differ in their architecture is simply by who owns the device and where the device is located that will store all of the associated text and image files. That's really the \$64,000 distinction between these there alternatives. Architecturally, they help compensate for bandwidth problems, for performance type problems.

And again, Steve, this is where we would say if you don't perceive that to be a particular problem, then you wouldn't see any distinguisher between any of these three alternatives, because you're really looking at it and saying all three of those are at a plateau above where we think we need to go. Okay?

So basically at, you know, at this point, I had a couple of other very quick observations to make. In implementing these sorts of solutions, when we put together our request to the commission for funding and authorization, some of the alternatives that I'm going to have to present to the commission is whether or not NRC decides to operate the system internally, i.e. put the server in the NRC computer room for the portal site or for the web page, versus the possibility of taking the entire application and placing the hardware and the software and everything else out at an application service provider organization who would be responsible for providing power, backup, security,

Internet, bandwidth access, and so forth. So all of these have a

sensitivity analysis that could be made from a financial point of view that says do you want to build it and maintain it and operate it internally, or do you want to build it and then deliver it and let somebody else run the computer for you.

And the other --

 $$\operatorname{MR.}$  FRISHMAN: If you ever went to NRC/DOE video conference you'd know the answer to that.

 $$\operatorname{MR.}$  GRASER: Yes, I've been to them. They always worked fine for me.

MR. FRISHMAN: Are they totally satisfying?

MS. NEWBURY: Depends on where they are in the NRC.

MR. GRASER: Other aspects in terms of implementing the alternatives we looked at is the concept of campus and co-location. These are just terms of trade within the computer industry. What we were talking about, campus is a location where each participant server is housed in relatively close proximity. Participants cooperate on shared resources. So if we were going to connect everybody in alternative four, for example, in a campus type environment, the -- we would have to identify a site where we were going to do that. And that introduces a level of administrative complexity, and everybody would have to be willing to co-locate their storage devices in the same place, or in the same campus.

In terms of co-location, you could also outsource that and just everybody identify -- we would all place our servers out at a commercial full-service computer installation. This where we're going to house it. Everybody send a storage device with your data out there. So those are some of the technical terminology that is going to be introduced a little bit later.

And finally, before I turn things over to Glen, this chart just indicates very relatively simply that for any of the alternatives

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three, four, and five, and this is probably somewhat also true for alternatives -- alternative two anyhow, that when you look at things like co-locating or outsourcing, any of those alternatives could have a different physical installation associated with it. And that would then somewhat color what activities go on if you're doing it in-house versus outsourcing the thing and what would be required to implement that system.

So if you focused on alternative three, for example, if NRC were to design, implement, and operate the system, the participants would still maintain their collections on their machines at their sites, and the LSN administrator would establish a portal and it would be installed inside at the NRC, versus you -- if you said well, let's outsource that. What would that look like?

Then NR -- the LSN administrator would design and build the portal, and we would operate it at a co-location facility. And there are companies that do this, application service providers. And the participants would still, under that alternative or that scenario, would still maintain their own servers with their own documents on their own machines operated by their own people.

So this is just to point out that for any of the alternatives, when I go before the commission I'm going to be having to do sensitivity analysis that reflects whether or not people are even willing in the first place to consider co-locating. And if people say no, that's not a good alternative, we don't want to entertain that, then that's one last sensitivity analysis that I would need to do. Okay?

At this point, Glen is going to come up and he's going to start talking now. This is Glen Foster from Labat Anderson. He's the L contractor for the license support network administrator. Glen has participated in all of the technical working group meetings, and he's S I going to be trying to focus on the technical aspects of it. So if you

have questions about the technical aspects as opposed to comments about the relative merits of one versus the other, Glen can certainly address the issues of the technical aspects of each of the three options and alternatives.

On the presentation materials that Glen has we have included what the technical working group identified as the significant technical aspects or attributes of the system, and, for example, what that means to the user, what does that mean to the participant. So we've tried to condense that all down into just a few slides for each of the alternatives.

And instead of going alternatives three, four, and five, Glen is going to start right off at alternative one. Okay?

MR. HOYLE: Before you begin, Glen, I think what I'm hearing is that we're going to want to hear about pros and cons of each. There are primary users and secondary users.

Primary users are those of you who will be in the proceeding itself, the judges, the participants, the parties to the proceeding.

And you're getting ready for the proceeding, should there be one. And therefore, you know, sort of the discovery phase we're starting you're starting to think about.

The second users are the member of the public. And I think we are, being a federal agency as we are, NRC has tried to put all of its material out in the public domain from the start. We're very conscious of the secondary users and how easy it might be for them to use the system.

I certainly agree with Mal that we shouldn't sell that

segment short. They're smart people. They're using the web more and

I more every day, and so forth. So I think we need to hear, and I don't

know whether we need it -- we'll hear it in the technical discussion or

I not, the pros and cons of each of these to the primary users and to the

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MR. MURPHY: And how much it's likely to cost the participants.

MR. HOYLE: And certainly cost.

MR. MURPHY: What's the financial impact on Nye County of the various alternatives. I don't care what the financial impact on NRC is. I sympathize with Dan. I'll go to the -- I'll go sit with you at the commission meeting to defend your choice if that's, you know, if that's -- if you're doing it because of a recommendation made by the ARP. But I don't have any institutional obligation to sweat how much it's going to cost you.

MR. GRASER: Right.

MR. MURPHY: But I do have a mission for my client to keep it simple and in -- and, you know, and as inexpensive as possible so that Nye County can participate effectively in the licensing process without having to shut down every other function we're performing for the -- for our citizens in order to meet the cost obligations of the licensing support network.

And Steve's sitting over there without any money to spend it on.

MR. BECHTEL: I like the way you --

MR. FRISHMAN: And I have even less obligation.

MR. BECHTEL: -- characterized the, you know, the portrayal of the alternatives. I think that's a good pros, cons, you know.

MR. GRASER: There is a little bit later in the day a couple L a charts prepared that try to characterize the cost of a participant with a relatively small site versus a medium size site versus a larger S I site. And we've tried to characterize the amount of hardware, software,

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AI RI EY & and ongoing commitment for each of those classes of users or classes of participants in the system. And that chart is back -- it's included in the handout package. It's in the back, and we tried to do that.

And I think even though it's not laid out in that handout for alternatives one and two, I think it would be safe to say that the participants, if they're a relatively small participant, the amount that it would take for them to place their documents and make them publicly accessible on the web is going to be relatively consistent from alternative one through alternative five. It's relatively same magnitude of cost. You're talking, you know, in the class of a relatively small machine and small number of documents. It would cost essentially the same for all five of the alternatives.

But we can pursue that a little bit further. I -- we -- I need to stop interrupting here so Glen can get started.

MR. CAMERON: Can I interrupt one more time? I'm sorry to do this, but if you could also, during this presentation and during this discussion, point out what might be likely causes of what I'll call failure in terms of the LSN that might -- there might be a higher risk of failure with one alternative than the other because of the fact that one would be harder to build; would you have it completed in time for the licensing proceeding; besides the cost angle.

Or another cause of failure might be that the participants, the primary users that John mentioned are not going to be able to use the system to get to the documents that they want. If there are things like that that might -- then I think it would be useful for people to hear that, to the extent you know it.

MR. GRASER: All right.

Glen, you want to go ahead and --

MR. FOSTER: Yeah. Thank you, Dan. Thank you, John, and thank you Chip.

RI EY & AS I'm going to try and speak to a particular aspect of how we got from one alternative to another, which is something I really haven't heard a whole lot of discussion about in this.

I mean alternate one is pretty obvious. It's a very simple strategy and it pretty much flows from very early web technology. And I think the idea of what the web came from in the first place, that if you have information of interest you put it on the web, and if you know of other information of interest, you put a pointer to that information. And somehow or another it all comes together in a way that is usable to people. And as you can see from the slide, that has a few implications in terms of what people would be expected to do.

I'm going to try really hard to overcome my tendency to read these darn things as I go down them, because I know everybody here can read as well.

The follow-on to some of these things is probably not as obvious as what was shown in the slide. I think -- go to the next.

Next slide. And that is that those people who have to interact with these different systems also have to beef up their efforts. Specifically, the LSNA administrator has got an audit requirement in addition to what we've been talking about here so far of making sure that people are playing by the rules. And in a distributed, linked scenario, the administrator has to do an awful lot more work to ascertain that the participant sites are maintaining the information that they need to maintain; that they're not, for example, silently retracting a document and substituting another document in its place after perhaps a document has been entered into the docket, and perhaps another party's going to want to enter the same document into the docket, and well, it turns out they're not the same.

How do we, you know, how does that scenario get addressed? Those are the kinds of things we were thinking about in this whole

effort. That would require constantly going to these sites, basically retrieving all the information at these sites and comparing it with a known good copy.

MS. NEWBURY: Can you tell me --

MR. MURPHY: Let me just stop you there. Why?

MS. NEWBURY: Where is that in the rule?

MR. MURPHY: Yeah.

 $$\operatorname{MS.}$  NEWBURY: I'm looking desperately for anything on certification --

MR. FOSTER: I can't speak --

MS. NEWBURY: -- in all of these and I don't find it.

MR. FOSTER: I can't speak to the rule. I'm only speaking to some of the design initiatives that we were looking at early on.

MR. MURPHY: And that was my first question. My second question is so what? That's what lawyers get paid to do is to protect their client's interest. You know, I mean if a lawyer sits in the middle of a trial or an NRC licensing proceeding and doesn't look at the bloody exhibit that's being offered by his opponent, we call that malpractice. That's what our job is.

MR. FOSTER: The -- one of the reasons that we felt that that was important, thinking back, is that helping the lawyers do their jobs was of paramount importance to us; that shortening the amount of time available or needed to do the discovery process was one of the key objectives that we had considered in looking at the tools that we could make available for them to do that. And we felt that alternative one would be much more challenging for an individual attempting to do discovery to correlate the various different aspects.

So, you know, your point's well taken, where is it in the rule. I don't think you're disputing the point that it may need to be done perhaps manually, perhaps by visual comparison of two documents

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that don't match. But if the software did it for you, it would save you a tremendous amount of effort and time to accomplish that same objective.

MS. NEWBURY: I think you missed my point. The LSN rule has no role for the LSN administrator in certifying integrity and auditing the system. That's gone. That was the case in the earlier rule. It's not there now.

MR. MURPHY: Well, and the second point is that this is, as you pointed out, Glen, this was originally conceived in 1986 as a discovery tool. Comparing the document that was given to you by your opponent in trial with another document that appears to be the same document that was given to you from some other source, you know, the tobacco company whistle blower, that's not discovery. That's just basic trial preparation. That goes well beyond facilitating the production of documents.

MR. FRISHMAN: The whole point of this originally, and I think still should be, it makes the transfer of information faster. And that's the bottom line. Helping the lawyers do their job is not it. It's just taking advantage of whatever we have in modern technology that makes information move faster. And, you know, helping the lawyers do their job is an entirely different question. You're helping the transfer work, you're not helping the lawyer do his job.

MR. MURPHY: That's right. And just if I could just follow that up, because I think this is really of critical importance.

And, you know, Chip, jump in here if you feel like you should. And gosh, you know, there's a lot more reasons why I miss my old friend Bill Holmsted, but I sure wish he were -- maybe he could come up out of the -- and talk to us here.

 $$\operatorname{MR}.$$  FRISHMAN: This all started in a room just past that wall over there.

MR. CAMERON: Well, if he does, we won't need a repository.

MR. MURPHY: Remember, the reason for the LSS, the original LSS, was, to, you know, go back and talk very, very briefly about history again. The NRC has a requirement imposed upon them by congress to conduct this licensing proceeding within three years, or four years if they certify something that says they can't make it in three.

Looking at the history of licensing proceedings within the NRC, it became clear that the one stumbling block to the NRC's ability to reach a decision within three years, or four, was the time built into the rules of practice themselves, the original 10 CFR Part 2, the time necessary to trade hard copy documents in the discovery process. So, you know, an intervener or a government participant, or whoever in a reactor licensing proceeding involving Duke Power files a request for production of documents. Duke Power, under the rules, then has X number of days to respond, or the staff has X number of days, et cetera.

So you start adding those time lines within 10 CFR 2 together, and it became very obvious to people familiar with the system that under the most perfect scenario, the NRC could not make a three year deadline. They just couldn't get the hearing and complete a hearing process and reach a decision within three years.

So in order to facilitate the NRC's ability to do that, you know, we negotiated this system that would speed up the transfer, the physical to -- to replace the physical transfer of hard copy documents with an electronic way to do that, to speed up that transfer of documents, to avoid that 15 days to turn over this document, 30 days to turn over that document, and then you got X number of days to file a motion to compel to production to the hearing board, et cetera, et cetera. That's the only thing we were trying to avoid.

There's noting in the LSS rule; there's nothing in the negotiations that we began in 1986; there's nothing in the LSN rule that

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ANT RII EX & ASS OCI ATI says lawyers don't have to work evenings and weekends to compare the buddy documents that they have got to make sure their client's interest are protected. The only thing, the only reason that people made compromises and gave up certain rights in the original negotiation was to make -- was to facilitate the physical transfer of documents from one party to another; electronically you do it instantly, at the speed of light, some other way it takes you 47 days to get, you know, whatever it is.

That's all we were attempting to do, to use this rule to -and I'm sorry if I'm getting excited about this, but to use this rule
and to impose administrative burdens and costs on woefully underfunded
and in some case non-funded participants in order to make life easier
for we lawyers is beyond the scope of the rule and it's beyond the scope
of the original negotiation that we engaged in and in which every
participant, actually, you know, made compromises.

We all gave up certain rights that we possessed under hard copy discovery, under the subpart G or whatever it is to 10 CFR 2. We all gave up certain rights. The State of Nevada gave up the right to delay this process for years; you know, the utilities gave up other rights; the DOE gave up certain other rights. And the only reason we did that was to facilitate the transfer of documents. It wasn't to make life easier for lawyers. It was to compress this process down to within three years.

And to go beyond that, it seems to me is a complete alteration of the original purpose for the LSS and the LSN.

MR. CAMERON: Well, now you know there's always been a concern, going back to the beginning of the negotiations, with the L integrity of the database. And the rule still cites one of the responsibilities of the LSS administrator as coordinating problems S Concerning the integrity of the database. And at one time, and there

was not a whole lot of objections to it when we still had the LSS, there was a huge, huge auditing program that was going to be set up under that.

And in fact, people on the advisory review panel asked if there was some way that they could participate in these QA checks on, you know, individual participants' databases, their compliance with the rule. And I think that again, whether this is needed or not needed, okay, I think that what this auditing capability flows out of the provision in the rule that talks about the concerns about the integrity of the database. And I'm not sure I'd want to characterize that as making lawyers' jobs easier.

MR. MURPHY: Well, no, I -- you misunderstand me. I don't have any problem with auditing whatsoever. None whatsoever. I've always assumed that under whatever system we had, an LSS or LSN administrator was going to be able to knock on your door some day and come in and say I need to audit your -- the compliance with -- your compliance with the requirements of the rule. I have absolutely no problem whatsoever with that.

My problem is in with coming up, you know, in the first instance, with us having to go out and buy and pay for and maintain and pay the staff or contractors within Nye County to maintain a system. Which goes beyond the requirements of delivering documents, making our documents electronically available to DOE and the NRC and State of Nevada and everybody else who wants to look at them. And doing so within -- with some integrity. I mean I don't have any problem with that.

MR. CAMERON: So the point is is that you don't really have I any problem with the need for auditing, or where that comes from in the rule, but you don't think that that should be a critical component of S I the choice of the design of the system?

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MR. MURPHY: Exactly, exactly. That may be Dan's burden. And that may place a greater burden on Dan. That's -- and that, you know, that's --

MR. CAMERON: Okay.

MR. MURPHY: That's true. I have no problem with that.

We've always assumed that at some point in time, either at initial -for an initial compliance check, for some sort of a certificate or
whatever you want to call it, or at some point in time in the process
the LSSA or the LSNA was going to be able to get into our shorts and
figure out whether or not we were complying with the rule. That's, you
know, I have no sweat, no problem with that.

My problem with -- is with -- is in the first instance, with us having to construct and operate and maintain a system which, you know, does that sort of a cross-check. And in a manner which, to me at least, looks like facilitating trial preparation, not document discovery. Even under, you know, since the invention of the quill pen lawyers have been required to compare something that was given to them by one whistle blower to something they found in the files of the tobacco company they're suing.

MS. NEWBURY: Auditing. As I read, the only certification that's required in this rule is for someone from the organization that is putting information into the LSN to certify they have followed all the procedures, that their information is there.

If there's an implied audit process after that where the NRC checks to make sure that we have done that, I don't know why it requires heavy auditing, and I don't know why there have to be highly structured guidelines and procedures to do it. Someone, hopefully not me and the DOE, will have already -- higher than me, will have put their name to the fact that they have already complied with all this and put together their own procedures. So I take exception with certification of

RI EY & AS integrity requires those things to occur.

MR. HOYLE: If I can comment on that. I think that's a very good point. And I apologize for having missed part of this conversation, but I certainly have been put back in memory on the things that Mal was talking about that we went through, you went through laboriously some years back.

But I also want to remind us that when we were changing the rule last year or so, I think NRC was prepared to go with a new rule, Internet based changes in the rule, without an LSN administrator. And it was your emphasis on the need for the administrator to be there, to help out, to keep the playing field fair and level that the commission said okay, we will have an administrator.

So I think part of this is okay, what is the administrator going to do in alternative one? And that's probably how we got down into the -- into what kind of auditing would we do. Because it says, you know, LSNA has no systematic control over the site. LSNA is unable to respond quickly to performance problems. So, you know, what's left? So just for a comment.

MR. CAMERON: And I think Claudia and Mal are basically saying the same thing, is that it's one thing to have an audit capability, but don't build that on the backs of the participants in terms of the choice of the design alternative.

MR. MURPHY: Right, exactly.

MS. NEWBURY: If I may add, the agreement to -- or the wish to continue having an administrator did not mean we wanted to give control to that administrator to run our systems.

MR. GRASER: Did not mean? So it did mean that you wanted N  $^{
m L}$  to give control?

MS. NEWBURY: It did not mean we wanted to give control.

MR. GRASER: Okay.

RIII EY & ASS OCI ATI MR. FOSTER: Actually, I'd kind of like to depart from this slide just a little bit right now and just, and dispel what is being brought up over and over again. I -- that being that the role of -- okay. Let me back up a little bit before what I was just going to say.

Participants obviously have two roles, one as a information provider and one as an information consumer. And the amount of rolling, role playing or role exercise each participant will do in each of those two roles will be different. Some have a lot more documents to provide than to look at, others are in the reverse position.

With regard only to that aspect of being an information provider, the responsibilities are not going to change, no matter which of these alternatives is recommended or considered today. The basic responsibilities, that of putting up your documents on a web server, are pretty much the same across the alternatives, and the differences are only in the details. The --

MR. MURPHY: I beg to differ with that. If you have a central campus, for example, or a co-location facility, Nye County or State of Nevada, or Esmerelda County, Clark County, the NEI, whoever, has to then make a choice about whether or not they're going to rely on Dan Graser's folks to administer, to, you know, to physically be there and take care of that system and do whatever it is that people do to maintain those servers and do all that kind a stuff. Or is Nye County going to have to hire a staff member or pay a contractor to be there at that campus at all times --

MR. FOSTER: With the exception of alternative four. I -- you're correct about that, but I -- and I was just going to get to that. And even then, I think the additional costs under alternative four are yes, significant, but not in an order of magnitude way.

As far as alternatives one and two and three and five go, pretty much the same system is going to suffice for all. There are

going to be differences in the amount of communications capability you might have to install, but -- and that of course costs money. It costs complexity, it costs issues. But really, from a technical -- from a systems point of view, it's pretty much the same kind a system. And if people understand that, I think we can avoid a lot of discussion on that base.

With regard to alternative one though, in terms of costs, since it is the simplest system and really the one out of which the other designs grew, it's going to be the cheapest by far for the LSNA point of view, but also for the participants as well.

This is why the technical working group felt that alternative one was less than desirable. With some of the concerns that were raised here today, you know, it may be wise to revisit some of these things. Everybody's going to have a different understanding of what -- which of these points are important or not. But for the record, these are why we felt that alternative one was, as Dan said earlier, a non-starter. And I think the main area in which this fell was the difficulty of use issue was the main issue that kept us from feeling that this was a good way to go.

MR. FRISHMAN: You say it's too complex for users, but it's exactly what everybody does today.

MR. FOSTER: You know, the web is one of those things that's changing fast. The whole Internet is changing very, very quickly. And I think a year ago, that statement would have been doubted by a lot of people in this room.

And when we concentrate on ease of use, I'm not so sure that we were thinking about absolute raw ease of use, but predictability of L ease of use; whether or not we could actually say -- you know, what's useful for me and what's useful for you are two different things. And I think you could say that about each individual in this room. And I

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can't predict to a fairly high level of confidence that the person -the third person in the fourth row can use this system unless I have a
fair amount of control over how that system's designed.

So I can't say that, you know, Joe Blow from Montana can use Nye County's system, or predict that they'll able to use Nye County's system without having a fairly high level of confidence what they're going to see when they go to their -- go to that system.

MR. FRISHMAN: But if Joe Blow from Montana finds it important enough to do that, he'll figure it out.

MR. FOSTER: Well, that may be. I think that a year ago we may not have had that same understanding, and even six months ago we may not have had that same understanding. And this is basically reporting on things that we were talking about last October. There was a fairly strong feeling within all the members of the technical working group from some of the counties, the DOE and the NRC that alternative one was too complicated for your average, unskilled Internet user to figure out.

MS. TREICHEL: One of the characteristics of this entire thing, it hasn't changed and has only increased, has been the way technology has changed and gotten ahead of what anybody thought. And I can't imagine that if you say last October, gee, that was way back then and now it's very different --

MALE VOICE: Only four months later.

MS. TREICHEL: Yeah. If this thing isn't expected to -well, I don't ever expect it to kick in, so I have to always use that
disclaimer. But if it isn't expected by the optimists to kick in for a
year or two, I can only think that it would be easier. And if it's not
easy to get DOE documents, then I guess there's going to be a lot of
Treal serious screaming going on when you can get anything else in the
world but you can't get DOE documents.

So it's DOE's responsibility to make those accessible. And

it's easier and easier and easier to have things accessible. And it's going to become easier. That -- people have a huge self-interest in making the web work. It's the marketplace, it's the information center, it's everything. So there -- just look at the NASDAQ. You know, this is -- this thing is going.

And I -- these conversations are quite interesting when you compare them with when we're discussing a repository, but that's just an aside. It just strikes me that the future seems so difficult to predict in this room, but in other rooms it's not.

MR. HOYLE: No, I think those are, comments from both of you, very well taken. And I think we have perhaps in our discussions in prior meetings of this panel, perhaps in the technical working group meetings which unfortunately I did not attend, where a lot of emphasis was put on public users. And maybe we've looked harder at that than what I call the primary users, who will be those who are the parties to the case and the judges.

And I don't want to dwell too long unnecessarily on alternative one, except that I know several of you think this is a pretty good one and we need to spend the amount of time on it that's appropriate. But just going down through the chart that you had on there why alternative one does not meet requirements -- and I know, Glen, you suggested that maybe looking at it today you might say it a little differently. Let's go through those saying it's too complex for users, but how would you have put it if you were going to make a comment about the primary users? Is it too complex for them?

MR. FOSTER: Well, actually, John, let me explain to you why
the emphasis was on the ordinary users. I think that we felt that if an

L ordinary user, if we made -- if we designed the system to be accessible
to what we're calling the ordinary user, the rank and file, that there

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I would be no question that it would be also appropriate for somebody who

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R:  $\mathbf{E}$ & was a little bit more skilled in the discovery process.

So I think that perhaps we were lazy, perhaps we just wanted to cover all the bases, but that we didn't really look at the distinguishing factors between those highly skilled users and the ones who were not.

MR. HOYLE: They're highly motivated anyway.

MR. FOSTER: And highly motivated, sure. I'm not sure that I'm really in a position where I can say whether or not it's, without talking to those users and without interviewing them in some depth, I'm not sure whether I can say whether or not it would be appropriate. However, since some of those users are here today, they're probably -and they've already spoken to this issue, perhaps it is.

MR. HOYLE: Okay.

MR. FRISHMAN: You know, there's an old principle in the Navy that every convoy moves at the speed of the slowest ship. I don't think that applies here. I really don't. We can't design this system for the most unsophisticated or least sophisticated potential member of the general public who might want to get access to it.

MR. FOSTER: Well, but that issue keeps coming up. You know, I mean we had a -- we've had a fairly long discussion about the public document rooms, library access, people with slow Internet connections, people with limited capability browsers. The topic keeps coming up, so there's obviously some constituency here that is very concerned with --

MALE VOICE: But those aren't the people who need speedy discovery.

MR. FOSTER: We're building one system. We're not building two systems.

MR. MURPHY: No, DOE's already got a system. And that sort of leads in, I'm going to follow your naval analogy here. If it's too

83 difficult to navigate, that's the participant's problem. And if other people can't navigate on somebody else's information, then that becomes part of the proceedings. That's an issue in availability of information for the proceeding. It has nothing to do with expediting discovery. MR. FOSTER: One of the things that we discussed early on in a fairly abstract way I hope is that the possibility was raised that it -- some participants may feel that it was in their best interest to

hinder easy discovery. And how would we allow for that being the case, if in fact it were the case? How could we help overcome that sort of point of view?

MR. MURPHY: If a participant was hindering discovery?

MR. FOSTER: Well, or perhaps a participant was interested in hindering discovery on somebody else's document collection.

MR. MURPHY: Right.

MR. FOSTER: I mean these are -- these really fall under the security category. And, you know, are --

> MR. MURPHY: They also --

MR. FOSTER: -- probably discussed there.

MR. MURPHY: They also fall under the category of what we pay judges to do.

MR. FRISHMAN: Yeah, that's what I mean. It's part --

MR. FOSTER: Well, see --

MR. FRISHMAN: -- of the proceeding. It hasn't got anything to do with the system.

MR. FOSTER: But if the judges are asked to make a decision, they have to have information on which to base that decision.

MR. MURPHY: Right.

MR. FOSTER: And it comes back to, you know, how far can we go, or what can we do to make that information available to them.

MR. MURPHY: Well, but if someone feels that their right to

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discovery is being hindered, they go to the judge. They go to the ASLB and they say party X is hindering my right to discovery. And the judge says prove it. Show me.

MR. FOSTER: And all the burden of discovering whether or not your discovery is being hindered is up to you?

MR. MURPHY: You bet. Absolutely.

MR. FRISHMAN: Yeah, the question came to my mind during the break, you know. How does the Justice Department continue to even survive in its never-ending lawsuit against Microsoft without all of this help?

MR. FOSTER: Well, it's because they subpoena Microsoft's --

MR. FRISHMAN: Right.

MR. FOSTER: -- disks.

MR. FRISHMAN: Right. And the judge allows -- orders a subpoena.

MR. MURPHY: Right. And the other thing we have to keep in mind is that remember we are replacing a hard copy discovery system in order to facilitate the NRC's ability to meet its statutory obligation to reach a decision within three years.

For the non -- for the potential public, you know, person who wants to have access to this system, what right did that -- did those members of the public have to get access to? And let's forget about the fact that Claudia's records are all public documents, et cetera like that. We're replacing a system which existed in -- under which primarily applicants were non-governmental agencies at the time. What right did Joe Blow from Montana have to demand access to the records of the Montana power company in an NRC licensing proceeding in which Joe Blow was not an intervener? Zero, none, bingo.

So why should we place additional costs and additional administrative burdens on the participants in this process when what

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we're trying to do is replace a system with one that would make it easier for the NRC to get to a three year decision? But why should we at that same time create rights and facilitate access which didn't even exist in the system that we're trying to protect, trying to replace?

MR. CAMERON: Yeah. I guess I would have to agree with the fact that the purpose of this system is to expedite discovery so that we don't have to do it hard copy after the application comes in. Under the LSS, there wasn't any public access at all.

MR. GRASER: Yeah, there was.

MR. CAMERON: Okay? No, not in the pre-license application phase. Only the headers. Okay?

We, when we got together at the ARP meeting where we discussed the proposed rule, we said well, why shouldn't there be public access to this system? Saying that there should be public access to the system does not necessarily mean that the system design is driven by the public access. I don't think it needs to be driven by the public access.

You guys have brought up two things related to public access though that could have implications for the participants, the primary users using the system. One is is that if it's not an easy to search system and so many hits come in, Dan, you were saying that the system would be harder for the participants to get into. Glen raised a possible security issue, perhaps if you were saying that the simpler the design the more someone could try to bring the system down in terms of availability.

I don't know anything about that. But I guess that I think that we really should try to keep in mind the primary user here rather than designing it at lowest common denominator, unless that has some impact for the primary user.

MR. MURPHY: Right. And remember how we got to that

24 25 R: discussion, Chip. You're absolutely right, but remember how we got to that discussion about public participation when we started talking about an LSN, a web-based LSN. And that is that we all recognized pretty early on in the discussions that if we were going to base this network on the world wide web; that public participation already existed in that network.

And as I recall at least, the discussion was do we exclude the public; do we fence this network to keep the public out, not do we design a system to facilitate public access.

MR. FOSTER: Well, that's very applicable to alternative one, because if you implement alternative one there's no way to distinguish a public random user from somebody who's in the in crowd. And so there's no way to build a fence around it.

MS. NEWBURY: But we discussed that at that meeting as well when we talked about perhaps having different levels of users, and passwords for people who were particularly interested, or who were interveners or part of this process.

MR. FOSTER: But that's what I'm talking about is though when the TWG discussed alternative one they felt that alternative one would not meet that requirement to differentiate.

MR. FRISHMAN: But why do we have that requirement?

MS. NEWBURY: Why not?

MR. MURPHY: Why do we need to differentiate?

FEMALE VOICE: So you can make sure --

MR. FOSTER: Yeah. To be able to provide predictable levels of service.

MR. FRISHMAN: I think we've been through this before, and I  $^{
m L}$  don't think that's an issue.  $\,$  And I don't think Claudia thinks it's an issue either

MS. TREICHEL: Well, it becomes an issue if you block

1 access. Then it really does become an issue. 2 MR. FRISHMAN: But level of service, I can't quite imagine 3 that the Yucca Mountain page is ever going to get hit so hard that there 4 is denial of service. I just can't believe there are that many people 5 who give anything. 6 MR. FOSTER: Well, actually --7 MS. TREICHEL: If there is, I get a bonus. 8 MR. FOSTER: With the tools available on the Internet right 9 now, only takes one person to shut a site down. 10 MR. FRISHMAN: Right. We found that out last week. 11 MR. FOSTER: For two or three days. And then maybe another 12 person for another two or three days. 13 MS. NEWBURY: Yeah, but those same people, if you're talking 14 the real highly talented ones, have shut down the Pentagon, the State 15 Department, and some of the most protected --16 MR. FOSTER: But I'm not talking about talented ones. T′m 17 talking about, you know, a 14 year old in Rumania. 18 MR. FRISHMAN: Well, maybe -- yeah. 19 MS. NEWBURY: Yeah. Well --20 MR. FRISHMAN: Maybe the FBI's good services would go 21 towards that, if anybody thought it was --22 MR. FOSTER: Sure. 23 MR. FRISHMAN: -- important enough to screw up the Yucca 24 Mountain page. 25 MS. TREICHEL: This has got to be --MR. FOSTER: I agree with you. Yucca --MS. TREICHEL: -- a real lame --RI MR. FOSTER: The Yucca Mountain page is probably not an E: attractive target. MS. TREICHEL: Yeah.

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MR. FOSTER: And really if you get back to looking at the differences between alternatives, alternative one is probably superior in that regard because they'd have to shut down a whole bunch a sites, not just one. MR. GRASER: Actually, the Yucca Mountain site was effectively hacked into and the mountains were replaced with a silhouette of a reclining female. And --MS. NEWBURY: That was several years ago. And I think we've --MR. GRASER: Right. MS. NEWBURY: -- increased our security. MR. GRASER: Well, I'm just saying in terms of characterizing it as not a probable target, there -- the -- back in the 1995 time frame the entire Department of Energy complex was wanked by the worms against nuclear killers, which came in through one of the laboratories. MR. FRISHMAN: Well, in this instance, what's the consequence? What, we lose three days in a three year licensing process? And we don't even lose those three days anyway. MR. GRASER: Right. MR. FRISHMAN: So what's the deal? MR. FOSTER: Well, we're talking about one particular type of security complex. Now one particular type of -- service attack. There's dozens. There's hundreds of different things that can happen to a web site. And, you know, going through all those things is way beyond the scope of our discussion today.

MS. TREICHEL: Can you guarantee that it wouldn't happen to  $^{
m L}$  three, four, and five?

MR. FOSTER: No, course not.

MR. GRASER: In fact, I think he just said that --

MR. FOSTER: You can't guarantee anything is secure.

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MR. CAMERON: Well, but again --

3 4 MR. GRASER: It's less plausible with option one.

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MR. MURPHY: But again, keep in mind the participant in this process who wants to -- or the two participants in this process who want to guarantee that we get from point A to point B in three years are the Department of Energy and the Nuclear Regulatory Commission, and perhaps

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the utilities, I -- you know. But DOE will do what is necessary, and spend whatever money is necessary consistent with, you know, their appropriations from congress to protect their site from those kind of intrusions so that they can acquire or obtain their construction authorization within three years. It's not Nye County's -- but why should Nye County and Esmerelda County and Clark County be required to maintain our web sites in the same fashion when it is highly unlikely that someone is going to attack the licensing process by intruding into Nye County's web site?

Those sites they're going to intrude into, if anybody even, you know, I

site, number one. And Claudia, as a part of her basic job description,

is going to do what she can to protect her web site. Why should Abby's

client have to do the same thing? Nobody's going to shut down the NRC

mean and I agree with Steve. The sites that they're going to -- that

are likely to be attacked are the NRC site and the D, you know, DOE

FEMALE VOICE: Eureka.

licensing process by attacking Esmerelda County's --

MR. MURPHY: Or Eureka. I'm sorry, Eureka County's web site, or Nye County's web site.

FEMALE VOICE: See, it's starting already.

MR. MURPHY: I mean that's the part that, you know, that's disturbing me in it. But, you know, fundamentally, I agree with Steve, that, you know, the chances of that many people really caring are fairly

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remote.

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RII EY & AS MR. FOSTER: Well, okay. What if the consequence of somebody attacking your web site was that you lost status?

MALE VOICE: Somebody has to make hate decision.

MR. MURPHY: I will --

MR. FOSTER: Well, no, I'm just saying --

MR. MURPHY: No, no, no. I will take my chances. I guarantee, I think we ought to go to lunch right now and not anybody worry about that. I will take my chances before the judge. The judge is not going -- the ASLB is not going to kick Nye County out because some hacker attacked us and shut down our web site. The ASLB is not going to deny DOE its construction authorization because some hacker attacked its web site and intruded on its data. You know, that's just not going to happen. I'll take our chances.

MR. FOSTER: We're dealing with very simplistic scenarios here, and the real world I think is much more complex. And I think that this is probably way off the topic, but I'm just throwing our for consideration what if somebody got into your web site and used it to shut down DOE's web site, and made it appear as if it were coming from your web site? That's the kind of level of things that we have to think about in terms of looking at these --

MR. GRASER: Again, it's a take your chances type --

MR. FOSTER: -- looking at these designs.

MR. FRISHMAN: So?

MR. FOSTER: Well, and you couldn't prove that it wasn't one of your guys.

MR. FRISHMAN: Somebody's got to prove that it was. And L that's what courts are for.

MR. FOSTER: Well --

MS. TREICHEL: Presumed innocent.

MR. FRISHMAN: The NRC is particularly not good at doing things like that.

MR. FOSTER: It happens, you know, six times in the first six months of the LSN, somebody might start thinking well --

MS. TREICHEL: There's a lot of people that already think -MR. FRISHMAN: I'll take my chances with the court before I
will with the NRC for, you know, for security purposes.

MS. TREICHEL: I don't know, I think we're all over the board here. This is just --

MR. HOYLE: I think so too a little bit, Judy.

Mal, are you maybe going down a path that would say there's still another alternative out there; that we do something differently with the NRC and the DOE material, and -- from your material, Clark County's, you know, the others? Are you saying that perhaps yours could reside in an alternative one environment and maybe that we should be thinking of something else for the other two?

MR. MURPHY: I hadn't thought of that, but I don't see any reason -- I mean sure. That's -- there may be an alternative six. That hadn't occurred to me. Maybe there's some hybrid that would satisfy everybody's --

MR. FRISHMAN: No. I think, Mal, in keeping with what you were saying before, and I think sort of in line with what I've been saying, is it's DOE's decision what they want. And it's the commission's decision what they want for how they handle their particular pages. They have a big vested interest. And we have a big vested interest too. And I think we may all see different ways to do what we need to do. DOE is the most vulnerable because it has the most to lose. And if they don't take care of their property, then shame on them.

MR. MURPHY: They're not going to do it anyway.

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MR. HOYLE: Mal says that --

MR. MURPHY: Doesn't make any difference what rule we write.

 $$\operatorname{MR.}$$  HOYLE: -- Claudia's going to do everything possible to keep it up.

MR. MURPHY: Yeah, they're going to do it anyway. And remember, I'm looking at the rule again. And Claudia, you know, reminded us to let's go back to the source every now and then. The rule says 2.1001 -- 1011 says:

"Among the other powers and responsibilities of the LSNA is to coordinate the resolution of problems regarding the integrity of the documentary materials certified in accordance with, you know, 1009 by the participants to be in the LSN."

Coordinate the resolution of problems concerning the integrity.

MS. NEWBURY: Not identify them.

MR. MURPHY: Not identify them and design the system in the first place to avoid any conceivable integrity problem. I mean we just can't do that. There's not enough money in the system to do that.

MR. CAMERON: But it certainly doesn't exclude that from a legal point of view, I don't think, but I think you're raising good policy arguments why -- I mean both the case with the audit and the case with the security considerations. You're saying why should a burden, additional burden from one of these design alternatives be placed on all the other participants besides DOE and NRC because of some concerns.

MR. MURPHY: Right.

MR. FRISHMAN: No, I think we're saying beyond that. Why on anybody, because each is responsible for his own?

MS. NEWBURY: Why is NRC asking to assume this burden? It's

not in the rule.

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RI EY & AS MR. HOYLE: Well, I think that is the basic question. And I think the LSNA is trying to determine all right, you wanted him in the act. Now what should he be doing? What is the breadth of his act to help Mal and Steve and the others get a good, warm feeling that Claudia's material is proper? And it continues to be proper --

MR. FRISHMAN: It's not a matter of proper. It's a matter of whether it is properly available. It isn't a question of proper material. It's a question of did you follow the procedure that made it available to everybody who wanted it at the same time.

MR. HOYLE: I stand corrected. I meant properly available.

MR. CAMERON: But as Dan and the working group -- as Dan said at the beginning of the morning is that he wasn't pushing one of these alternatives over another. What they did is they went in and they looked at each of these alternatives from a number of different perspectives and presented that to the ARP for discussion. And that's what they're getting at.

MR. FRISHMAN: I think we're probably just so used to rejection that we see that word and we immediately respond.

MR. HOYLE: It could be. Poor strategy.

Let me ask the members. It's 12:30. I think I would like to hear two, short description of alternative two, and then break for lunch. Two might result in the same kind of discussion we just had, and if we could avoid getting into repeating ourselves, I think we could hear a little bit about two and then decide where we want to go from there. Is that agreeable?

MS. NEWBURY: Sure.

MR. HOYLE: Okay.

MR. FOSTER: After considering the simple strategy of one, which we spent -- we look at what we could add to one to perhaps make it

a more useable system. And a fairly obvious aspect, capability, came out too, that being a search capability across participant sites. And so basically two is one with an added centralized search interface to the portal.

Participants still have the, pretty much the same sort of system in their -- under their purview. The -- but the user, instead of going to each individual site and searching on each individual site for the information of relevance, has the ability to look at it in one spot and get returned to them all information that matches whatever search that they attempted.

MR. GRASER: And the risks?

MR. FOSTER: This basically added a little bit of complexity to the design, but at the -- but a very small one, using off-the-shelf products and a fair amount of additional capability. The -- we didn't feel that this would affect the schedule at all; that it was something that was doable and that additional integration was not -- it was not a big factor. The -- it's still a very low cost, relatively low cost to the final three alternatives to the NRC.

Each of the participants would have a small additional administrative cost to alternative one; that being that there would have to be some sort of interface between the central search engine and their site. Not a database type of interface, but some sort of regular presentation of the data on the site so that the search engine could interpret what it found.

MR. HOYLE: Would that be a one-time cost, or a continuing?

MR. FOSTER: It would depend on how they populated their

site. It would be something that they would have to, first of all,

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L not -- I don't want to use the term develop, because that implies too -
more work than it is. They had -- but they'd have to architecture it in

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I some way and then they would have to follow those rules while they put

ANI RIII & ASI OCI ATI their documents up.

So for a participant with a few documents, put it all up at once, then yes, it would be a one-time costs. For participants who had a larger document collection that may put it up in pieces, it would have to adhere to those standards at each instance of putting up their information.

What are the consequences of this? And I think people who have actually done a lot of searching on the world wide web using similar products to what this would be sees this all the time, in that when you get a large or even sometimes a small response from a search engine, it's difficult to ascertain the relevance of one document against another document. The -- you may get four documents that you're not looking for as well as the document you're getting (sic) for. You may not get the document you're looking for for some quirk of the search engine. They don't rank them generally in a way that is -- that corresponds well to what people expect. And by that, we feel that that makes things difficult to use.

We felt that there may be some difficulty with participants maintaining some of these interfaces. We felt that issues with regard to data presentation, what Daniel was talking about earlier with regard to data normalization may be hard for users to deal with.

For example, he used the -- the example of dates I think is a very easy one to understand. And especially when sorting, you may want to look at versions of documents. And if the dates used between these different versions are not consistently presented, then you can't sort them by date. So we felt that that would add to difficulty to use and complexity of the system.

And finally, there's no way to search within a subset. That if you get 100 documents or 1,000 documents as a return to a query, how do you specify that you only want to search within those 1,000 documents

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 for another term of interest? We did not try to predict all the ways in which people can search or the specific search terms for which they would be looking. Our assumption was because of the great number of documents within the system as a whole, the similarity between those documents, that trying to do sample searching and such like was beyond what we could do without a -- without putting up a system as a prototype.

There are other technical issues with regard to this with the strategy, and Dr. Nartker of UNLV was very helpful in having us understand some of the consequences of the strategy in terms of usability to the average user, and even the more capable user. So we felt that alternative two did not materially improve upon alternative one in terms of a system that would give us what we wanted in terms of usability, in terms of maintainability, in terms of administrability (phonetic), if that's a word.

MR. GRASER: Is alternative two worse than alternative one in any way?

MR. FOSTER: We felt that it was less predictable. That we may go through the additional integration, the additional feature adding without getting much more useful in terms of usability, and that it could be confusing. And it was unpredictable what we would get for our money, basically.

MR. CAMERON: Glen, when you say that the -- it may actually increase cost, and then down I guess in the third bullet, it would exceed the cost of simply purchasing the portal. The cost to who, to the NRC or to all the participants?

MR. FOSTER: I think that is one of the areas of L unpredictability that I'm talking about here. One of our biggest efforts in this whole technical working group was to reduce the S L unpredictability of certain aspects of it. We have unpredictability in

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what tools we need to implement the strategy; we have unpredictability in the area of band width; we have unpredictability in what user base we -- what level of expertise we needed to satisfy in the user base, and many other areas.

So I think that you see that as the alternatives one, two, three, four, and five progress, the various aspects of the designs are all intended to increase what we can predict, how much we can control, and how assuredly we can provide a system to do what we felt the system needed to do.

MR. HOYLE: Dan, anything else?

 $$\operatorname{MR}.$$  GRASER: That -- I think that's essentially it on the alternatives one and two, John.

MR. HOYLE: Okay. Any comment on two?

MR. GRASER: No.

MR. HOYLE: All right. I suggest we take an hour break. So let's be back at 1:35. 1:35.

[Whereupon, at 12:35 p.m., the meeting was recessed, to reconvene at 1:35 p.m., this same day.]

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[1:35 p.m.]

MR. HOYLE: I apologize for my own late return, but we got a late start.

Mal has to leave this afternoon earlyish, and so does Judy. I think we're going to have to really speed along if we're going to try to bring a vote or look for consensus by about 3:00. It's now 5 of 2.

So before we begin the afternoon review of three, four, and five alternatives, we did cover one and two this morning. I just wanted to ask if there's anyone that wanted to comment further on one and two?

MR. GRASER: Okay. I had a couple a housekeeping points that I just wanted to get back on the record very quickly.

The first, in response to Claudia in terms of where in the rule is the licensing support network administrator shouldering any responsibility. And it goes right back to 2.1001 in the definitions of the license support network administrator. And at that section of the rule it indicates that, "The LSNA is responsible for coordinating access to and the integrity of the data available on the LSN."

So if you hang it on the words "responsible for the integrity of the data on the network," that's essentially where you -that's the foundation for why it is the LSN administrator wants to be looking into the participant collections.

There was another point that I just wanted to make. There was quite a bit of discussion in terms of the various alternatives levying additional burdens or additional requirements on the participants. And one of the things I did want to clarify is that in terms of the audit capability that I would certainly be looking at  $^{
m L}$  implementing, everything that I have been considering was to use automated tools to do that. And that would require no investment of any resource on any of the participants over and above putting their

documents out on a server somewhere and making them available.

So in that regard, it's an automated function. Software goes in, takes a snapshot, and comes back and submits that information to a statistical type process. So there's really no additional burden that should be levied against any of the participants in terms of helping to support that sort of activity.

Okay. And also, this morning when I was doing the brief overview I did touch on the costs of the system to the participants. And I just did want to reiterate that although there was a lot of active debate back and forth within the technical working group, I thought that it was a fair characterization to say that especially for the small participants, there is not much difference between what it would cost for you to meet the obligations of the rule for alternatives four -- three and alternatives five.

That was represented in the table. That's included later on the presentation. And I just wanted to again reiterate that in my opinion, I don't think alternatives one and two deviated too much from that model, except insofar as alternative one and alternative two would require that the participants provide their own site searching software, their own site engine, their own site database software system to maintain and organize the files. So in that regard, vis-a-vis alternative three, four, and five, where the portal software can do those functions, in fact, alternatives one and two may represent somewhat higher cost than alternatives three and four and five.

So those were just some of the technical aspects that I wanted to add to the discussion. Or at least, you know, make my point. Put it on the record, so to speak.

MR. HOYLE: Okay. Any other comment?

I think I would like to ask the Engelbrecht -
MR. VON TIESENHAUSEN: Can I ask a quick question, Dan? I'm

AKN RIL EY & ASS OCI ATE not quite sure exactly how long does the system have to be up?

MR. GRASER: Well, I think that probably depends upon the hearing process. As you know, there is I guess what you would call an optional fourth year to the licensing process. So theoretically, that could -- a three year hearing and licensing process could be four years.

And then I guess it depends on the disposition of the database after the licensing activity whether that needs to be available or simply archived. But when you tally the whole thing up, I think we're probably talking probably six years of operation, five to six years of operation grand total.

MR. MURPHY: It could be longer than that too.

MR. GRASER: Could be.

MR. MURPHY: Depending on whether -- on, you know, within five to six years theoretically the NRC will issue a construction authorization. We then go into constructing the repository. Then DOE comes back for a license to receive and possess. If we consider that all one licensing proceeding, we could --

MR. GRASER: Then you're probably talking --

 $$\operatorname{MR.}$  MURPHY: -- theoretically we could maintain these -- have to maintain these sites for 20 years.

MR. GRASER: Right.

MR. HOYLE: Okay. Let's press on.

MR. MURPHY: And one other thing, John --

MR. HOYLE: Yes.

MR. MURPHY: -- before we get started. It occurred to me, you know, I didn't mean my criticism this morning -- and I hope I speak for everybody else around here. I didn't mean my criticism this morning N to -- or I didn't mean by that that I don't appreciate and acknowledge the hard work that the technical working group has gone through in S I coming up with these alternatives. I don't agree with some of them, but

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ANN RII EX & ASS OCI ATE I certainly acknowledge and appreciate the work that they've done.

MR. HOYLE: Thank you, Mal. I appreciate you putting that comment in.

What I'm going to suggest is that we let Dan and Glen run through alternatives three, four, and five. I'll say quickly, we'll see how that works out. But why don't we hold our questions until the end of description of five, so that I think we'll gain some time by doing it this way. So go ahead.

MR. FOSTER: After looking at the deficiencies, perceived deficiencies of alternatives one and two, we will -- we -- after looking at the deficiencies we perceive to exist in alternatives one and two, we tried to identify how best we could technologically address those deficiencies. And we looked at a particular piece of software called a portal, which does a number of different things, but the main objective of a portal is to provide a single point of access to multiple data sources for individuals. And so you'll find that three, four, and five all have this portal aspect in common. And it is actually the distinguishing factor between alternative one and alternative three.

Alternative three grew out of alternative one with the addition of the portal software and various other aspects, because portal software doesn't stand alone, it requires a data base and various other aspects. And then alternatives four and five grew out of the alternative three idea. So three, four, and five have quite a lot of commonality, quite a bit more commonality than they have differences.

In your, I believe it's tabs L, K, or L, M, and N. I may be wrong on those references, but in the tabs that describe the plans for alternatives three, four, and five you'll see that there's this notion of a component. And each of three, four, and five have different -
three different components that address various requirements that the system is intended to address, one being the audit, one being user

access, and one being the data storage and retrieval aspects.

Alternatives three, four, and five differ only in that final component. The portal and the audit aspects of it are the same. So we're going to focus on the differences rather than the similarities.

And this slide actually talks about similarities, so we're going to pretty much get through that. They're all -- they all look to the user the same way. They all pretty much deliver the same data to a particular query. They all have a fair amount of customability to particular users. They can differentiate one user from another with ease. They can give users different levels of access to the system, blocking some out when -- while granting others in on a fairly easy to manage basis. They all pretty much require the same things of the participants, with the differences that we're going to address in a moment.

I'm going to -- we're going to show you three conceptual schematics of the alternatives. The schematics are necessarily simplified. And this is always something that -- there's lots of ways to show computer schematics. I'm sure everybody in this room has seen dozens of computer schematics that attempt to display graphically a fairly complex connection of computers, but these schematics are intended to focus on the differences between the systems.

You see alternative three we have distributed web servers connected somehow. The line between the web servers and the LSN index and centralized portal is intended to be the Internet. The line to the user is also intended the Internet -- is also the Internet, but there is a distinction in how -- in the type of data that moves over those lines.

One more thing, Dan. There's a -- one of the things that's L distinguishing of alternative three that, opposed to four and five is that the user sort of has a back channel to the participant web sites in S L three which does not exist in four and five. That should the

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centralized portal be down, for example, the user could always go directly to the participant web sites. Okay. Thanks.

Alternative four differs from alternative three in that the participant web servers have been moved close to the participant -- I mean to the portal site. "Close" meaning a situation where a high band width between the sites can be attained at a fairly cheap cost. And we were thinking local area network for that. I should point out that proximity is spelled incorrectly. I apologize for that.

The issue that this was intended to address was the fact that connections over the Internet are uncertain. Whether or not you can make the connection at all and the amount of band width of performance of that connection can not always be guaranteed. This allows the portal to have good access to the collections.

Now one of the things that this implies is that the participants have to update their web servers in a location that may be tough -- may be geographically distant from where files, the original documents reside, and administer servers in those -- in that location. And that can be -- that adds some complexity and some challenge to this alternative.

Alternative five was intended to address the band width issue and also the issue of remote administration. In alternative five, the web servers are moved back out to sites as chosen by the participants and the portal site was enhanced with a, basically a big disk that contains all the information on all the web servers as a copy. The portal will go out and query the web servers to update its own cache, but for delivery to the user, the documents will be delivered from the cache.

The advantage of this is that the band width between the web servers and the cache can be uncertain. That can be a slow trickle of data and still satisfy the needs of a user for rapid access to the

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documents.

Under alternative three, participants have a responsibility to put up a web server, to make it available, make adequate band width available to the web server. Now we haven't exactly determined what that adequate -- word adequate means for every participant, but for larger participants that could be a significant capacity. The portal software gives the users quite a bit of capabilities, some of which I've already talked about. It's very flexible. It can pretty much be whatever the user wants it to be.

One of the examples that we've used in talking about this in the past is something that came out of the LSS document, and that is the ability to save queries. At one point, I guess that was felt to be a very important tool for checking to see what new information is available in a -- with regard to a particular subject; that you could run the same query a week later or a month later that you -- and see what has changed from the previous time you ran it. That's the sort of capability that, you know, that's just an example. That's the sort of capability that the portal would provide.

Disadvantages are, with this, is of course access to the participant sites from the portal in that it's an uncertain connection, and that can unpredictably affect performance.

Here you see what we felt about the decision factors, which will be summarized in a later slide. One thing I should have stated at the beginning of this segment is that all of alternatives three, four, and five were felt by the technical working group to be acceptable; that we recognize that tradeoffs would have to be made between them in terms of costs, in terms of what the ARP felt was important and where you wanted to put your most about predictability. Where one is better in terms of predictability of response, another one is better in terms of predictability of results.

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MR. GRASER: If I could just add a quick comment on that one. I think a more precise way to characterize the technical working group was to say that we all recognized that alternatives three, four, and five were all technically viable.

MR. FOSTER: I think that's --

MR. HOYLE: Did you finish that one?

MR. FOSTER: Yeah, I think that's enough on that.

Okay. As I said, alternative four differs from alternative three in that the participants' servers are moved in close proximity to the portal site. There are four disadvantages that come to the advantages of this proximity, and one is that with modern networking technology, it may not be easy to keep one's participant's malfunctioning system from interfering with another participant's properly functioning system. It may be difficult to ascertain who is responsible for that situation.

It may be difficult for participants to administer a system that is difficult, or I'm sorry, is distant from their main operations. It may require staffing changes, it may require technology changes, it really reduces a lot of options in that area. However, response is very predictable and the total amount of band width available is certainly much easier to achieve at a reasonable cost.

How this impacts the decision factors are shown here.

Really again, it's a viable solution. It's really more of a tradeoff.

You -- this particular slide, decision factors three, four, and five all should be considered together. It's not going to flip through it on a single overhead though.

I will point out though that alternative four, because of  $^{\rm L}$  the uncertainties with regard to administration of the participant sites, will probably pose the highest cost and highest burden on the  $^{\rm L}$  participants of all the alternatives we talk about today, at least --

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certainly all the alternatives that we've analyzed in depth, which is three, four, and five.

Alternative five introduces what I like to call a honking big disk to pretty much as the water tank does for a town. You can pump the water into it slowly and you can draw the water at your leisure, sometimes rapidly when you have a fire or sometimes at a slow amount of time. And that's really what this disk does for you. You know, thinking of it as a single disk of course is inaccurate, but -- technically inaccurate, but essentially that's what it does.

Really, when it comes right down to it, one of the things it means is that participants won't have their -- have to have their sites up 24 hours a day. They might be able to have their sites up 2 hours a week, depending on the amount of data that they have available. It really doesn't matter for them to -- they don't have to exhibit the same amount of rigor and control of the administration of their site. It gives them a lot more freedom to perform system operations like backup, things like that.

At one point we talked about the idea of loading this disk, this centralized storage disk through some other method besides the web. However, I believe that we felt that having a web server, a distinguished point of distribution for each participant, was an important part of the rule. And now I didn't make that decision, I just seem to remember it. But this -- that's pretty much the distinguishing characteristics of this design.

This design pretty much gives an awful lot of what we thought the system should have. The real big negative here is, when it comes right down to it, is cost. It's, as you'll see later, it's almost double the cost of alternatives three and four, which are pretty close in cost. And the reason there is because of -- excuse me, because of this disk. And there is a certain aspect of that with regard to the

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current state-of-the-art with disk storage and the amount of data that we estimate to be in the LSN, they don't really fit together particularly well at this time. And that kind a is what makes this high bump happen. MR. MURPHY: That's the highest cost to the NRC, not to the other participants? MR. FOSTER: Yes, that's -- well, overall cost. We looked at --MR. MURPHY: I don't care about the overall cost. I care about how much of a check Nye County has to write. MR. FOSTER: Actually, when it comes down to the cost to the participant, this is probably the lowest cost to the participant. MR. MURPHY: That's what I want to hear. MR. FOSTER: Again though, we're talking -- we're not talking hundreds of thousands of dollars. We're talking tens of dollars or thousands of dollars. That's pretty much the descriptions of three, four, and five. MR. GRASER: Right. Before --

MR. MURPHY: Can I ask one --

MR. GRASER: Okay.

MR. MURPHY: You didn't get to your slide, I guess 26, the cost to establish web presence.

MR. GRASER: That's coming up next. That's me.

MR. MURPHY: Oh, okay.

MR. GRASER: I'm going to step right into that one before we open up the questions.

All right. The technical working group had quite a bit of  $^{
m L}$  give and take and back and forth on this in terms of trying to characterize costs for the participant organizations to establish a web presence. And I'll be the first to admit that we still internally

amongst ourselves are arguing and quibbling over exactly how big is big, and how big does the server need to be for a big installation.

But generally, what we tried to do was to characterize, oh, three central cost characterizations that -- or cost factors that a participant could expect, and then to represent those for the participants who may have fewer than 1,000 pages versus those who may have anywhere between 1,000 and 10,000 pages, versus those who have in excess of 10,000. And of course the more in excess of 10,000 pages you have, the bigger the numbers can get. That's why there's a little plus sign at the end of that column over on the right-hand side of this chart.

Generally, what we tried to do is to identify the cost of a server machine that a participant would need to support. That would be the server that the participant would put up on their external web site to house their collection.

Second cost, maintenance and administration. This is an annual, recurring type cost. And this represents, I would say for the most part, the investment in bodies and labor hours in order to do the care and feeding of your web page presence. And again, this is fairly hard to characterize not knowing what people pay for database administrators or web administrators and so forth, but we at least took a crack to try to give you a frame of reference to say are we talking tens of thousands or are we talking hundreds of thousands here. So we tried to characterize that cost of human involvement in keeping the site operational on an annual type basis.

And then the third cost factor is looking at the cost of the band width and communications back and forth between the various alternatives and the size of your collections and the numbers of documents that you have out there. And again, we tried to characterize this, and this number could again fluctuate by quite a bit depending on

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And the footnotes on this table are fairly important. These represent what we considered to be a reasonable cost range. It certainly can vary from party to party to party. And for collections with larger number of pages, the high end cost can keep going up as the collection size goes up.

The other -- the second footnote down here also worthy of note is that the document conversion costs can be significant. And again, they are predicated on the size of your own particular collection and how much conversion you need to do, and what you may already have the documents in, what formats and so forth.

And the bottom footnote down there again is just to indicate that in terms of the maintenance and administration, you're really talking partial FTE's. And it depends on how much you pay for full-time equivalent body or part of a body to perform routine database administration.

Okay.

MR. MURPHY: Okay. Dan, just for -- and I'm sure you anticipated this coming. Just for comparatively at least, because I suspect that you don't have figures, but how does -- how do alternatives one and two compare to the ones we have set out here, three, four, and five?

MR. GRASER: Well, as I said, I think for the small participants, alternative one and two are probably going to be somewhat higher given the fact that instead of relying on the indexes that the portal software delivers and gives, the participant would then have to provide some mechanism to do file management. And in computer talk, S that means some kind of a database management system. And that under

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alternatives one and two, if you are pointed towards a site, then the site needs to provide the search tools, whatever tools are there.

And now there's some degree of variability in there. If you want to take the minimalist approach across-the-board, someone would be able to set up an HTML environment and simply provide browse navigation tools with very simple or rudimentary term searching capabilities without having an underlying text engine with all of the boolean operators. So it kind of depends on what the participant chooses to establish as the tools at their site.

So whatever you would get with alternative one and two in terms of your retrieval capability is what the site can give to you, because there's no master engine, so to speak. So I think when you add in whatever the cost of the software and database management type software you would need to provide additional search and retrieval and file organization tools, you would add to the cost of what you would normally be seeing under alternatives three and four and five.

MR. MURPHY: Well, three and five?

MR. GRASER: Three and five, yeah.

MS. NEWBURY: Dan, is this based on the fact of just a cold startup? You don't have a web page at all and this is what it would cost you to get in? Because as you know, Nye County has a web page already. The State has a web page already, we certainly have one, Nye -- Clark County as well. So is this additional costs on what we already have up and running, or is this pretending we didn't have anything?

MR. FOSTER: Let me address that, because I'm the one who came up with these. This assumes a cold start essentially, as far as I the hardware and software goes. However, it assumes some level of expertise. Not a specific level of expertise, which accounts for the I wide range in the costs, but that people are generally familiar with

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what the web is; and if not how to start a web server, where to go to find somebody who can start a web server.

There's more information on that in the descriptions in the management plans on the alternatives. There's some information in there about the origin of -- the beginnings of these figures. But yeah, they pretty much start by buying a box, or taking a box out of the closet that is no longer suitable for desktop because the desktop software has outgrown -- everybody's got a Pentium in the closet, and that Pentium will run open source operating systems just fine. And your cost for that is zero.

MR. MURPHY: What about leasing? What if we --

MR. FOSTER: There's --

MR. MURPHY: I mean we --

MR. FOSTER: I didn't --

MR. MURPHY: Nye County right now has --

MR. FOSTER: I did not attempt to address every single different procurement method. One of the things you can do though, you can buy a web page for \$30 a month from almost any ISP in the country and store a significant amount of data on it --

MR. MURPHY: Well, yeah, that's what Nye County does now.

MR. FOSTER: -- on that web page.

MR. MURPHY: We have a -- I don't know, I think our --

MR. FOSTER: So I think there's an awful lot --

MR. MURPHY: I haven't the slightest idea what it costs us.

MR. FOSTER: -- of different --

MR. GRASER: That goes back to the Boy Scout analogy that I used at the October meeting, basically what would it take for a Boy Scout troop to set up a web page and still -- they could still meet the rule, and they, you know, they could piggyback on other resources in S other places and essentially do it for next to no cost.

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Well, if there are six devices there and it costs \$6,000 to connect six devices, then it's not a question of on a per document basis. It's really a question of how many servers are sitting there in that shared resource environment. Unless you want to work out some other cost algorithm that would share it based on the size of the collection or the size of the documents, but I'm not sure we could achieve consensus on that.

MALE VOICE: We'll go for number of words.

 $$\operatorname{MR.}$  MURPHY: I'm confident that aren't going to go with alternative number four, so I --

MR. GRASER: It's like saying what are the overhead costs of setting up a computer center. And what is the cost that gets allocated to the next guy who brings a server into that site, and how do you allocate those shared costs, utilities and power and, you know, phone lines, and whatever else.

MR. MURPHY: What's the hookup charge?

MR. GRASER: What is the hookup charge, exactly.

MR. VON TIESENHAUSEN: I have one other question on alternative five. Basically what you plan to do there is mirror participant sites. And so we're dependent on funding from DOE. So say our funding disappears in two years and you have mirrored our site just prior to that. We could basically discontinue our site and you'd still be happy?

MR. GRASER: Well, I think what you're asking is if you came to the licensing proceeding and you only had 10 documents, and you made the 10 documents available, and the portal came in and mirrored and copied down those 10 documents, would you be expected to maintain those N L 10 documents for the next 6 years, because you're not adding any new documents, you don't want to modify any documents, and so forth.

And I think at that point, if we looked at that, that would

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 be a procedural and guidance sort of issue that we would deal with, because the rule doesn't seem to be totally clear on that. I would probably look at that and say if the document haven't changed, and there's no activity and you're not adding more documents, and they're on the portal site and the portal is backed up and its stable, you've made your documents available.

In a way, you could carry that logic the next step further and say well, I'm the Department of Energy. I have 1,000 pages of material every week coming out. How about if I just put the 1,000 pages out, you sweep it into the portal and you copy those documents onto the portal site. Could I then sweep the 1,000 documents off and then fill that site back up with next week's next 1,000 documents? And then after the portal successful sweeps it, you clean them off and load the next 1,000 documents on. In other words, you use your external site as a staging area to load the documents, any new documents, any changed documents.

And I say if you follow that logic, that same logic would seem to apply; that yes, a participant could do that and meet the -- what the rule says, is you've made your documents available for the web. And the portal is taking over the responsibility for providing continued search and retrieval capability, but the documents have been made available to the web, and they are continuing to be made available to the web.

MR. VON TIESENHAUSEN: There is one major difference. DOE would still be getting money and we wouldn't?

MR. GRASER: Well, I was just trying to, you know, sketch it out. Course that all presumes that the LSN administrator continues to N L be funded as well. And the LSN administrator takes a draw against the high level waste funds from nuclear material safety and safeguards. So S I I have to negotiate on an annual basis as well. And we all know what

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happens when computer technology gets down in budget space vis-a-vis engineers and scientists. So that might be pegging your hopes on a --betting it on the comb as well.

Okay. If we can move on here. I had one more financially oriented chart I wanted to present to you. This does not represent participant costs. This represents only the LSN administrator pieces of cost components, and these are the cost components that I would essentially have to go to the commission and say to the commission, this is the type of funding that I need to have.

So in addition to the previous chart which outlined for the participants generally what their involvement is, this is the dollar number that the commission looks at and looks at as part of their decision process in terms of saying what are we willing to fund; how much of the nuclear waste fund allocation do you want out of the pot of money that's currently available in any given fiscal year. And so this is a characterization of the one-time cost to design and implement a system and then a characterization of one year's worth of annual recurring costs. And this would carry us up, for example, through I believe December 2001.

The costs here are not identical to the costs if you just went through other materials that we had and tallied them all up. The technical working group came up with these cost characterizations. The numbers you're seeing here reflect additional overhead costs within the Nuclear Regulatory Commission for things like developing training programs; establishing a help desk, a help line; travel, coordination with the integration and so forth.

So it includes a lot of additional one-time and recurring L costs that I have to consider when I'm putting together my authorization list to the commission, so it just has a little bit more of a robust S I flavor to it. And the one thing that I would say here is these numbers

again are relatively soft. They need to be scrubbed in much greater detail, and that will be the next step in the process. These numbers could vary substantially, six digits give or take, probably.

Go right ahead.

MR. PITTS: I was just going to, I was going to say what's the -- what's your feeling on the likelihood of the NRC funding these levels of expenditures? What's your feeling on that?

MR. GRASER: I don't really want to speculate on --

MR. PITTS: Oh, come on.

MR. GRASER: -- right now, on the probability of what the commission is going to do. They'll be reading the transcript, and I don't want to be prejudging any of their deliberative processes. I --

MR. PITTS: Could we just have a thumbs up or thumbs down?

MR. GRASER: Well, I'll --

MR. PITTS: Say a number and --

MR. GRASER: I can, for example, I can say that the commission has already earmarked funds for fiscal year 2001 and fiscal year 2002, which in their aggregate, get us very close to being able to support the sorts of numbers we have here. Unfortunately, they're split out over fiscal years in such a way that half of the money comes to me too late to meet my delivery requirement. So there's going to be some internal -- there are active internal discussions going on in that regard.

But I'm saying in terms of looking at things and saying \$2 million, are we in the right ball park? I think we're in the right ball park in terms of the funding that the commission anticipated. It's just we still need to do a little work back at the shop in terms of getting the money in the right fiscal year.

MR. MURPHY: Does that -- have they put aside enough costs for alternative three or five?

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MR. GRASER: Well, I'm saying right now three and four do not look to be problematic, in terms of the commission's expectation from last year's budget cycle.

MR. MURPHY: What does that mean? They don't --

MR. PITTS: It means that five would be; right?

MR. GRASER: Three -- no, I didn't say that. I'm just saying three and four are in the right ball park range for what the commission last year anticipated in terms of a reasonable cost for the system based on placeholder numbers that had been placed in the budget beforehand. So a \$2 million number would not be a surprise to them.

MR. MURPHY: But a \$4 million number would?

MR. GRASER: That would be 100 percent higher than the numbers that they've been seeing in the past. And that would require some explanation, some justification, some rationales for why it is we're pursuing that strategy. But again, if you look at it and you say it's not \$40 million and certainly not \$200 million, which are numbers that had been thrown around in the past. So we're down in at least the right number of digits, and the commas are all in the right places.

MR. PITTS: Claudia, can you tell me what your budget is for support, approximately?

MS. NEWBURY: No, I can't. But it's -- Lou, do you know what --

MALE VOICE: What was the question?

MS. NEWBURY: Budget.

MR. PITTS: About how much is the DOE's budget? Because they're doing, you know, they're doing the work right now. They have N L web site, they're scanning documents, and they're storing massive amounts of documents and stuff like that, so --

MS. NEWBURY: I don't know the budget numbers offhand, to be

honest. My concern was that I didn't want additional costs on top of those unless I needed them for some reason.

MR. PITTS: Oh, I  $\operatorname{\mathsf{I}}$  -- yeah, I understand that. I was just curious.

MS. NEWBURY: But no. I can get you them.

MR. HOYLE: Dan, given your responsibility as the licensing support network administrator, and given the discussion you've heard this morning and this review now of three, four, and five, what would you be most comfortable with? I'm not looking for a recommendation. I'm just asking what would you be most comfortable with, given your responsibilities?

MR. GRASER: In budget space, or in technical space, or -MR. HOYLE: In the alternatives we've been looking at.

MR. GRASER: Well, in terms of the case that's easiest to present to the commission, I think alternative three or four are -- represent the most straightforward of the portal type solutions; that still assign to the participants meeting their obligations of making documents available, being responsible for the integrity of the documents that they place out on their web sites and so forth. And in terms of the financial aspects of it, they represent a reasonable cost for value.

And having been involved in some major litigation support cases in the past, and document volumes and page volumes, I, as I said, I think that those represent reasonable costs for the value. So that's my opinion. I think if -- those would be the easiest to represent to the commission from an approval point of view.

MR. HOYLE: And for small entities, the cost to them doesn't  $^{
m L}$  change much over the range of alternatives?

MR. GRASER: Over alternatives three -- let's see, alternatives three and four, the cost to the participants are -- well --

MR. HOYLE: Three and five.

MR. GRASER: Three and five, the cost to the participants are relatively consistent. Alternatives one and two could represent some add cost in terms of the hardware and software up front.

Alternative four, alternative four increases some of the ongoing labor and database administration in an awkward administrative environment, so that could raise some costs. That's generally the way I would summarize it.

I think even within the technical working group the representatives all had their own view of whether or not that's 100 percent true. You know, that may be my view, and I think if you ask the guys from the Department of Energy they would say well, yeah, you know, maybe you could characterize this as being a little bit lower rather than being a little bit higher. We, even up until Thursday afternoon of last week, we continued to have those dialogues back and forth.

And that's the sort of thing that there will always be professional differences of opinion as to how much it's really going to cost. And you won't really know until you sit down and sharpen the pencil and start to put together an exact configuration. And at that point, then we could quibble as to -- for example, I think there was a reasonable dialogue that was held as to whether or not alternative five really needed to be a Sun Unix machine, or could possibly an NT server do the job. And that debate was going on even during the break.

So -- and those are the sorts of things that we didn't try to nail down a specific cost. We simply tried to characterize it in terms of the magnitude of dollars that might be involved in it to give people a better feel.

MR. MURPHY: There's one other factor here that we haven't discussed yet, just to -- I think, and that is with -- if I understand this correctly, the only alternatives that give the participant, the

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small participant, Nye County, complete control over the -- its site, including when the documents become available in searchable, you know, form, are one and two. Is that not true?

MR. GRASER: No. I think in all five of the scenarios all of the participants have control over when they make their documents available.

MR. MURPHY: No, no. I mean when Joe Blow from Montana can find documents on the Nye County web site. I mean under alternatives three, four, and five we get our web site up; we load our documents; we get all the document -- all the relevant documents in the Nye County files, Nye County contractors files are loaded. Can Joe Blow from Montana then search those documents and find the matrix porosity document that he's looking for, or does he have to wait for Dan Graser to get his act together?

MR. GRASER: Under -- let's see here. Under alternatives -- actually, under all five of the alternatives the participants may choose to allow access to the URL location either through the portal or directly from the Internet.

MR. MURPHY: But in order to do that we then, under alternative five, for example, we then also have to purchase that file management search and retrieval software. Which you said we were going to save by allowing you to purchase it rather than we purchasing it ourselves.

MR. GRASER: Under -- okay. That was a complex series of if statements.

 $$\operatorname{MR}.$$  MURPHY: Well, just if we go with alternative one, simple thing.

MR. GRASER: Right.

MR. MURPHY: Nye County's got a web site already.

MR. GRASER: Right.

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MR. MURPHY: Full flexibility.

MR. FOSTER: In full, yeah.

MR. CAMERON: Why couldn't that Nye County site operate independently of the -- continue to operate independently of the --

MR. FOSTER: There's no reason why --

MR. MURPHY: It could. I mean it could even under alternative five, but only if we buy that additional search software.

MR. FOSTER: Right. You put the documents on your web site, you still have to have -- a user have some way of identifying what's inside the file. You probably in your experience have stumbled across web site directories where you see files, long lists of named files with a dot TXT or something else behind them. And multiply that by let's say 600,000, where the file name is simply a numeric sequence, or an accession number, or an ID number for a file.

You have no other way of knowing what's in the file until you click on it and pull it out. So until you have some kind of search mechanism in there, just putting out the raw files and the poor user, whoever got to that index, would probably have no way of knowing which documents were which.

Okay. Where we are right now is an area that we could just flash this one up here. And then instead of me talking about next steps, we could move right into whatever additional discussion John wants to entertain to start to gain the feelings of the group.

These are the decision factors that the technical working group came up with. And again, there was a lot of active discussion as of Friday morning at 11, or 1:00 in the afternoon on Friday afternoon regarding how the technical working group was going to present this information.

Essentially what we tried to do was focus on the distinguishing factors between alternatives three, four, and five.

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all of this is with the foundation that you understand that alternatives three, four, and five all shared those common aspects. They would all be technically feasible.

So then it comes down to well, what is it that makes these things different. And we came up with some general characterizations, and in fact the technical working group may, you know, may still not be in 100 percent agreement on the way these things were characterized. This is a negotiated document here in front of you. Okay?

The performance and band width, I think it's a fair characterization to say that alternatives four and five provided a better means to control band width access to large data stores and data files. So that if band width were a problem, one party could be responsible for ordering up more band width. Okay? So it's alternatives four and five that provided that.

The design simplicity, what is simple to me as the LSN administrator is alternative three. What is simple to the participants potentially, at least out of three, four, and five, was alternative five, because it offered a lot of flexibility in terms of putting the files out there and then relying on the portal software to do the indexing. So the design complexity there from the participants is we can put the files out there and somebody else would be responsible for doing the indexing and the search interface, and so forth.

The alternative four did have an aspect to it that should be drawn to everybody's attention in that it is location constraining.

Alternative four would require us to all sit down and have more meetings and try to identify well, exactly where is it we would all agree to identify as the portal location. So if you think today has been fun, wait until you get into that dialogue.

The completion schedule risk to the LSN administrator, and again, this is where I feel closely about something whereas other

participants may not, if I need to have the system available in July 2001, alternative four requires me to engage and identify and locate a central site. Alternative five requires me to go out and purchase more hardware, more equipment, and integrate that additional hardware and equipment. So from my perspective, there's a little more complexity to alternative four and five that adds a degree of additional risk to me meeting a fully integrated system by July 2001.

Document integrity and availability. Under alternatives three and four, the parties still have the documents on their machines. They're responsible for keeping their machines up, operational, backed up, and so forth. Under alternative five, if in fact the portal software came in and swept the documents out and replicated them and so forth, suddenly the LSN administrator and the portal site and the big cache device, LSN administrator would become the custodian of other people's evidentiary materials.

From a financial administration point of view, alternative four requires some kind of a cost allocation structure for the allocation of these overhead costs, the shared costs. In terms of the cost to the participant, alternative five is potentially the lowest cost to the participants. And the lowest cost to the LSN administrator, conversely, would be alternative three.

So that was generally the way we characterized the decision factors here. It comes down to risk factors in terms of meeting your deliverable date; comes down to manageability of the system, and do you want to introduce more complexity and more layers of bureaucracy and administration in terms of sharing sites; and in terms of the financial cost to the participants, which ones represent the least amount of investment to the participants.

So those were the discriminating factors that if you looked at these -- and there are others. I don't want to mislead you into

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believing that there were not other aspects that members of the technical working group made some very earnest and well made points about other distinguishing factors. But in terms of the decision factors, these were the key elements that we were looking at.

And at this point, instead of moving into the next steps, I'm going to turn it back over to John at this point so that we have adequate time to hear input from members of the ARP and for John to point us in a direction towards getting some closure on today's discussions.

MR. HOYLE: Thank you, Dan.

The floor is open for discussion. Not only on three, four, five, but any further comment on one and two. If now having heard about the other three anyone wants to comment on that.

MR. MURPHY: Let me just try to reach to suggest a consensus, just to get things started. My guess is, at least in my own mind, I think the discussion is going to -- is probably going to be between alternatives one and five. So I would suggest, I don't know if we -- takes a formal motion here or not, John; as the chairman you can advise us. But I would suggest that we just reject, as a starter, we just reject alternative number four.

MS. NEWBURY: I agree.

MR. HOYLE: Yeah. I would -- yes, I would take that as a suggestion and as a motion. Do I hear consensus on rejecting just the one alternative four?

MR. FRISHMAN: I think it should be.

MR. HOYLE: Okay. You're in the lead over there.

MR. MURPHY: I am?

MR. HOYLE: You've got the ivories.

MR. GRASER: So basically everybody agreed --

MR. HOYLE: Everybody agreed.

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MR. GRASER: -- four is --

MR. MURPHY: We didn't hear from you. You were silent.

MS. NEWBURY: And you have to put your stuff on too.

MR. HOYLE: You're absolutely right. Dan has the NRC vote.

MR. GRASER: Yes. I agree that four is probably not worth

MR. HOYLE: In a letter to the commission where I'll report on this meeting and our decisions, do you want me to give a reason why we rejected four? And if so, what would the reason be, or reasons.

MR. MURPHY: The reason in my mind is -- and let me see if I can put these in order of significance. I guess the -- well, they're too intertwined. It's cost and loss of control, control of the system and the documents. I would -- I don't want -- I don't like alternative four because it would be excessively costly from Nye County's point of view, not only for hardware, et cetera, but it would require us to have a physical presence at this remote location, whether that location was in Las Vegas, or Rockville, or wherever.

MR. GRASER: And that may in fact replicate something that you may already have available.

MR. MURPHY: Absolutely, absolutely. And secondly, I don't -- I'm pretty sure that remote location would not be in Pahrump, or at least not in the Nye County office of Pahrump. And so wherever that campus is located, it requires Nye County to surrender some aspect of the control of its documents to someone else, and that causes me some heartburn.

MR. VON TIESENHAUSEN: I'd just like to add one comment to that. It basically would force us to make a long-term commitment for up  $^{
m L}$  to 20 years.

MR. MURPHY: Sure.

MR. VON TIESENHAUSEN: And there's no way that I can ever do

that. And I will sit back in the back and let Dennis take over.

MR. MURPHY: I think there are -- I see advantages and disad- -- I see advantages to both alternatives one and five. The obvious, taking, you know, just assuming that Dan's description of the relative costs of the various alternatives is accurate, and I think I'm sure it is, there's obviously a cost advantage to Nye County and the other participants, the smaller participants at least, to going with alternative five and letting the LSNA purchase the software, et cetera.

The disadvantage of that is that we can essentially do everything we need to do to fully comply with the LSN rule and have a web site that is loaded and ready to go and still not have access, still not have total control over that web site. And thus -- and not have our documents accessible to the public and other participants. And let me -- to the participants and other public in that order of priority, because the NRC is not ready to go with its software, for example.

And I don't think that's a remote possibility. I mean, you know, I can certainly see the commission stretching out the budgeting on this, you know, et cetera.

MR. GRASER: I think I can -- I pledged my first born on that at the October meeting, if I recall correctly.

MR. MURPHY: Yeah. I think you're right, yeah, as I recall. So -- and I'm guessing, and I wish -- Chris Berline (phonetic) is not here, and I wish he -- I guess he had a conflict or something this afternoon and -- but I'm guessing that the additional cost to us to purchase that software, the search software or whatever it's called, is not that significant.

MALE VOICE: It's not --

MR. MURPHY: Right, yeah. So, you know, with those considerations in mind, I think my preferred alternative and the consensus I propose is alternative number one. It's the simplest, it's

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the most flexible, the easiest for us to do. We can all get there the quickest, it seems to me.

And the problems associated with alternative number one which were displayed for us on the screen, I did not see any problems in that list that are insurmountable, number one. Or number two, which would detract from our ability to achieve the original goals of moving toward an electronic form of discovery, which I think is we have to keep in mind what we're all about here, why we're doing -- why we started doing this in 1986 in the first place. I don't see any of the drawbacks associated with alternative number one which would unreasonably interfere with our ability to achieve the original goal of the LSS or the LSN.

MR. GRASER: Well, and if I could, I would just like to throw in two cents worth on that issue.

You know, there's really probably a grand total of about a nine month window where, from the point in time where DOE and NRC's collections are required to be made available. Then subsequent to that, for a period of I guess about nine months is really the period of time where the system is either going to make it or not make it, because that's when the other participants' collections come on board. And that's when people are starting to prepare and starting to prepare and starting to prepare for all the subsequent activities.

And in terms of looking at alternate one, that's where you have to ask yourself, is that going to be a make or break software solution during that vulnerable window of nine months when everybody is -- the documents are all going to be coming out available, people will be using the system. And you have to ask yourself the question, is the iterative nature of having to visit multiple sites going to be in any way detrimental to the ability to adequately perform your discovery. It's not just the speed of delivering the documents, it's the power of

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So that's just my perspective on alternate one, but that's my point of view as a techie.

MR. MURPHY: That's right. And I just don't think that's going to be that great a burden. I --

MR. GRASER: Okay.

MS. NEWBURY: I tend to agree with Mal again. DOE already has a web site. It already has its collection, it already has a search engine. And alternative one, it merely means we move all that out onto the web. We intend to do that in one way or another whether you layer on alternative five or alternative three on top of that, but we do have to provide access and we already are providing access.

So I don't know what it buys us, I guess. If it buys the NRC a lot in that you're happy to search two sites at once in the first nine months, spend the money, but I don't know what it truly gets you.

MR. HOYLE: Claudia, at the October meeting you described how your database was working and how people were searching it, and you were describing some difficulties that people were having searching your database at that time. And your bottom line was over the next months, years, you were going to make it more user friendly. Is that the direction you're moving in now? I mean I hear you say yes --

MS. NEWBURY: Yeah.

MR. HOYLE: -- you do have a web page; yes, you do have documents, but I haven't heard yet how easy they are to find. Though Steve has used your system and he's found it okay.

MS. NEWBURY: Yeah. What is out there does not have the search engine that it would have if we moved our equivalent to our N L records system, or the information from the records system out. There are better ways to search than what is on that, our home page, at the S I moment that we would be able to make available. So again, I don't see a

huge advantage to us in moving to a portal type system.

MR. HOYLE: Okay.

MS. NEWBURY: And we are the other group that needs to have everything out August of next year.

MR. MURPHY: I guess the other point, to address the concern, Dan, that you and Glen raised, is that I don't see the participants here in this room -- well, I shouldn't say ever, but I think it would be extremely rare for us to search all sites. You know, just do sort of a broad search; I want to see all the documents in all sites associated with matrix porosity; and thus have to search six sites seriatim, et cetera, and take that time.

In -- it's much more likely that in preparing for the licensing proceeding we will be searching for particular documents that we are generally aware of that we know should be found on the DOE web site. Or DOE will be say, you know, saying well, you know, Nye County had the EWDP and I can't find, you know, I thought I had it in my file, the backup, you know, or some field notes associated with the drilling in EWDP 19-D, and I can't find it anywhere, so I'm going to go into the Nye County web site and get it.

You know, that kind of stuff is going to go on much more frequently, it seems to me, than going in and saying well, you know, I need to look at all the geochemical documents on everybody's web site, so I have to take Monday through Wednesday and search everybody's web site in preparation.

Now the potential future participants who aren't in the room now, you know, they could experience that problem, but I, you know, it's not our responsibility to design the system for those folks in the first I instance. We have to make it usable for them, but not go overboard and spend money unnecessarily to do so, I don't think.

MR. HOYLE: Dan, the nine month window you were speaking of,

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when everybody's documents are coming on-line and there might be an urge at that point for various participants to look into it, is that because at the end of nine months the proceeding is about to begin and they're going to need to have contentions developed, or relatively soon after that nine months?

MR. GRASER: Yeah. I believe that's the number that sticks in my mind, is when --

MR. HOYLE: Okay.

MR. GRASER: When you need to start having the contentions developed, yeah.

MR. HOYLE: Okay.

MR. MURPHY: But, you know, we know some contentions we've got already.

MR. GRASER: Well, this is true.

MR. FRISHMAN: I think that I'm generally agreeing with the corner over there, which is very embarrassing, but -- I think that Dan, for your purposes, if you feel like you have to do something, then three would probably be the one that meets all the needs, because it's number one with the redundancy.

MR. GRASER: Yes. In essence, well, it's probably closer to number two with redundancy.

 $$\operatorname{MR}.$$  FRISHMAN: But it functions as number one. And it functions, you know, in --

MR. GRASER: It functions --

MR. FRISHMAN: -- through your shop as well.

MR. GRASER: It functions better than number one or number two, because it takes out all of the variability that's involved in the different result sets and the different relevancy rankings that users would be getting from one location to another location. And in terms of S again going back to that section of the rule that says that I'm the guy

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who's responsible for insuring the integrity of the data --

MR. FRISHMAN: That's what I mean. If you, you know, if you can't -- if you think number one doesn't allow you to meet the rule, then number three is the minimalist way of doing it and still allowing the function of number one if anybody -- if someone wants to use it that way.

 $$\operatorname{MR.}$  GRASER: I wouldn't characterize number one as not meeting the rule.

MR. FRISHMAN: Okay.

MR. GRASER: I would characterize number one as perhaps providing an inadequate degree of flexibility and power and simplicity in its fundamental design, so that at any later time if we needed more flexibility, more power, or more of anything else, we would not have any -- enough time to recover from that. So from a conservative design point of view, you over engineer it trying to anticipate what's going to hit, because world can never guarantee to you that somebody won't come back at a later time and say well, gee, now we need more; we need more, we need quicker, we need faster.

So it's just from the designer's point of view, I, you know, I look at that and I say well, it gives me better search and retrieval tools than alternate one or two, and gives me more flexibility. And yes, it does provide its own backup, so to speak, because the public can still go to the participant's location or come through the portal site.

And one of the advantages of the portal site is that it also allows us to instill a uniform LSN numbering sequence on any of the documents, so that for later reference during the hearing process -each participant assigns their own accession number to their own

L document collection. And when you get to the hearing process and you start trying to designate documents as exhibits and attachments and so

S forth, you want to be able to make sure you have a uniform numbering

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ANN RIL EY & ASS OCI ATE There's nothing worse in the world than being involved in a licensing or litigation action where you've got six different sets of numbers floating around. It makes it very difficult to keep track of which end is up.

So just from those points of view, I'm more in favor of three. I think they add some value over one. But I didn't mean to imply that alternate one or two wouldn't meet the rule.

MR. PITTS: So, Dan, under alternate number three, how long would a participant have to keep their documents alive?

MR. GRASER: You'd have to keep your documents alive under alternative three, you'd have to keep the documents out there for the duration.

MR. PITTS: So that could be as long as --

 $$\operatorname{MR}.$$  GRASER: Well, the duration of the license proceeding, I believe.

MR. PITTS: Four years max then?

MR. GRASER: Well, four, five, six, or 20. Pick a number, yeah. Four, five, six, or 20.

FEMALE VOICE: Three hundred over here.

MR. GRASER: Three hundred.

MR. MURPHY: That's another, I mean that --

MR. GRASER: Well, sure.

MR. MURPHY: That's really stretching it, but if you wanted

 $\ensuremath{\mathsf{MR}}\xspace$  . GRASER: Carry it out to closure. There's another

license.

to take --

MR. MURPHY: That's right.

MR. GRASER: That's 100 and some years.

MR. MURPHY: -- look at construction authorization, license

1 alternative number five. So until I consulted with my techies back at 2 NRC, I can't say for how long those would have to be retained. But if 3 they follow suit on most normal installations, it's probably the life of 4 the facility plus 10 years; right? So that's --5 MR. CAMERON: The license --6 MR. GRASER: -- 110 years. 7 MR. MURPHY: What's -- yeah, I've got a question that just 8 occurred to me. How would, under alternatives three or five, portals, 9 how would the graphically oriented material be handled? 10 MR. GRASER: Well, the graphically oriented materials could 11 be stored. It's just what happens to them when they hit the users 12 desktop. 13 MR. MURPHY: But where are they stored, and whose 14 responsibility? 15 MR. GRASER: Under alternative five, you could store those 16 on the portal server. 17 MR. MURPHY: No, no, no. We -- this is the stuff that can't 18 be stored. This is the -- these are the cores. This is the cuttings 19 from our drill holes. This -- these are --20 MR. GRASER: Oh, you mean physical objects? 21 MR. MURPHY: Yeah. 22 FEMALE VOICE: Just scan them. 23 MR. GRASER: Physical objects --24 MR. MURPHY: Or not -- yeah. I said graphically, but yeah. 25 MR. GRASER: Yeah, okay. MALE VOICE: You need a digital camera. MR. MURPHY: The non-electronic. R: MR. GRASER: I cannot --E: MR. MURPHY: The stuff we have to put a header on and say come and ask us for it.

five, plus the costs of five.

I have a question on five, which is on three, you talked about the user going to the index and portal, but there was sort of a back door to each individual site. Now that's not shown under five. You just have the user with the one line going to this and this. Is it not also possible to go like this, or is it --

MR. GRASER: That's --

MS. JOHNSON: Are these not the same servers?

MR. GRASER: That's the discussion we were having a few minutes back in terms of saying if you put no search engine --

MS. JOHNSON: Yes.

MR. GRASER: -- on your machine, even if you opened up that URL location and somebody came to it, they would have no mechanism except going through a raw directory of files. And if those are numbered files that have no intuitive knowledge, you would have no idea what's inside those files. It's just like stumbling across an index page when you're surfing the web right now.

MR. GRASER: No. In alternative three you would be able to go into, because in alternative three, the, you know, well, no. In alternative three you wouldn't necessarily have to have a search engine. Participant wouldn't necessarily have to have a search engine in alternative three; right? We're rebuilding an index.

MS. JOHNSON: But that would also be true of three?

MR. FOSTER: Abby, you're correct.

MR. GRASER: You're correct, yeah.

MS. JOHNSON: Oh, thank you. Okay.

MR. FOSTER: I actually, let me just say that that is  $^{
m L}$  true -- well, I'm not going to speak of four since it's been discarded, but three and five, the -- what users see if they go around the portal  $^{
m S}$  I is up to the web -- up to the participant site itself.

MS. JOHNSON: Okay.

MR. GRASER: Judy. We're going to hear from Judy.

MS. TREICHEL: I would stick with the simplest one.

MR. GRASER: And in your view, the simplest one is?

MS. TREICHEL: One.

MR. GRASER: One, okay.

MR. HOYLE: Abby and Jason and Dennis, you have one vote amongst you. You're part of a coalition of local governments that surround Nye Count.

 $$\operatorname{MR}.$$  BECHTEL: In the interests of the voting go on this week, do you want a caucus or --

MS. JOHNSON: So does Nye get a separate opinion, but we don't?

MR. BECHTEL: We have the --

MS. JOHNSON: Or are we with Nye?

MR. HOYLE: Nye County --

MR. MURPHY: Yeah, we're the site is county, so we have special status here, Abby.

MR. BECHTEL: Maybe I'll just express my view on it. I was initially enthralled with five because of the ability, it appears to be able to access information maybe more readily than say one, now as I understand one, and had fairly low costs to the participant. But in thinking about the -- and I think Engelbrecht expressed this about the commitment that I would be able to make as a county, I -- we have a system that's analogous to one right now.

And I, in thinking about how we would use this, anything I believe that we might litigate, I mean we're very interested in being I able to access information as readily as possible, but any item that we would want to litigate I don't think would be on the system anyway, S I because a lot of our issues are not recognized by DOE's issues. So I

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ANN RIL EY & ASS OCI think we would be getting information from an independent source anyway.

So in light of that, I would opt for Clark County, as one of three counties I guess here, opt for one as being one that I think is probably the most realistic for us to use.

MR. HOYLE: Jason.

MR. PITTS: Oh, my gosh. I would say just because of my work with the northern counties, I think it's going to be tough for them to commit to having a system, you know, up for that amount of time. And also, anything that makes searching easier is going to be beneficial to them as well, because I'm sure some of them will have part-time attorneys and district attorneys doing the research for any litigation that they might pursue, which I don't know if they will or not. And I think five helps out to do that.

And I also believe that under five a county like Nye or Clark could still maintain their independent web site and choose which documents they preferred to upload to the NRC site or not. You know, they could keep that on their site and have a different search algorithm.

So I would say in the interest of -- I think Lincoln County would be fine. We have a web site, we have our documents on there right now. So I mean I don't think there's going to be any problem stretching it out for -- I don't know about 20, but, you know, 3 years certainly. So -- but I think for like White Pine and Lander and stuff like that, five's probably more attractive.

 $$\operatorname{MS}.$$  JOHNSON: Well, is this a voting thing, or is this a -- what do you --

MR. HOYLE: Well --

MS. JOHNSON: I mean are you going to take this into consideration, or what?

MR. HOYLE: I would like to leave the meeting with the

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ability to go home and write a letter to the commission, send it to everyone in draft, see if you agree with it, that would have the position of the panel. It does not have to be a consensus opinion. I can include minority views, I can include a breadth of information in this letter. But if there was, you know, one particular alternative that everyone was kind a focusing in on, that would be the main one that the letter would show. So that's where I'm coming from.

MR. GRASER: And just so there's no misunderstanding my position as representing the Nuclear Regulatory Commission, I think in terms of functional capabilities to do a potentially very difficult job ahead for the commission staff and afford them the tools that would be necessary to help them in doing their job in terms of reviewing the documents, I think alternative three or five, either one of those approaches using the portal software would beset meet the expectations of the NRC internal user constituency.

And then flipping back my other hat, in terms of being the LSN administrator, in terms of operability of the system, I'm inclined to favor alternative number three. And so that's just my straightforward call on those, if you wanted to know where I stand.

MR. HOYLE: Dennis, it seems to me that since there is a coalition involved, and there's been some slight difference in views, and there's some counties that aren't here, I think you should have time to get in touch with them. I don't want to give you very much time, but you need several days, I would think. Can you do it by phone?

MR. BECHTEL: Well, we have a phone call planned, a teleconference planned tomorrow on another issue, so we can probably get back to you, I would imagine, pretty quickly. I'm not assuring you  $^{
m L}$  we're going to reach a consensus, but we'll do ---

MR. HOYLE: Well --

MR. BECHTEL: -- the best we can.

business, if they were to only keep these materials for five years and all of a sudden there is a requirement to keep it longer because of something that I'm doing.

MR. CAMERON: Because there may be a different document universe depending -- of discoverable material for each license amendment that comes in.

MR. GRASER: I can certainly investigate it. And I think it's safe to say that I could at least get the lay of the land from Brenda Shelton, who's NRC's records manager. She may be able to narrow things down for us and say well, in general, records disposition for non-docket materials that are submitted as -- in support of other licensing activities but are not included in the docket, normally NRC handles them this way in a record space, so they would either fall under this schedule or that schedule. And if it's this schedule, it's only, you know, the life of the facility plus 10 years, or if it falls under that schedule, it might be a different disposition.

But the bottom line is that it's materials that are in NRC's possession, but that are not part of a docket. And I know the disposition schedules on the docket material, but you threw me the curve ball on the non-docketed materials that are now on the machine that's under my control. I'll investigate that. That's an interesting question.

MS. TREICHEL: I guess I just have a question. If you go all the way through a licensing process and you either -- well, I guess it would be grant the license, wouldn't you keep a record, you, NRC, of everything that had gone into that decision for whatever time? And are we discussing items that counties and state and whoever use to oppose your position?

MR. GRASER: Well, again, I can speak to what I know, is that if materials are entered into the docket, and the docket is the

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basis for the decision. Am I correct, Tom? I mean what is in the docket is what is the basis for any of the decision. Under NRC records retention schedules, anything that's in the docket has a defined retention period. So we're a-okay there.

The curve ball that came here is that if we are talking about alternative number five, and not only do I sweep in an index, but I also grab a copy of the document, then I grab a copy of the image and I place it on a machine that's an NRC resource, automated computer system. I can't take it off the machine until I get a disposition schedule.

MS. TREICHEL: Right.

MR. GRASER: And it's not docketed material, but it's not NRC record material, but it's on an NRC machine. So I'm going to have to get an interpretation on that. But normally, the things that get retired to the National Archives are the things that are in the docket. So those are the ones that would be normally retained.

And that's why I had reservations about taking custody, so to speak, under alternative number five. You know, I'm now responsible for the long-term disposition of whatever's going to happen to those documents. And as you say, they're other people's documents. And now they're suddenly, you know, I'm the godfather.

MR. CAMERON: Just because some of those documents -- some of those documents are going to make it into the docket.

MR. GRASER: Some will.

MR. CAMERON: That the decision is on, and some of them won't. The ones that don't make it in don't have any special cache just because of the fact that they were discoverable documents. They may N L have that for some other reason independent of that, because they were NRC memos or whatever on something else.

MR. GRASER: But for the most part, that's an administrative

concern, an administrative issue. And as Claudia points out, hell, if you're talking in terms of 100 years worth of retention, what's 2 or 3 years to find out from National Archives how long I need to keep them?

MS. TREICHEL: Well, as far as the affected units of government offices, they're mostly counties. And I would guess if the funding dried up and they went out of business most of them answer to their county commissions anyway, so it would just become county records.

MR. GRASER: Well, any records that you may have had on a computer, they're your own.

MS. TREICHEL: Yeah.

MR. GRASER: And if you chose to take that collection down and dispense with it any way that you wanted, sure, that's -- but if those documents were -- if we were not under scenario five, if you took those documents down, then they would become unknown to the licensing support network.

MS. TREICHEL: Okay.

MR. GRASER: As soon as we went back and rebuilt the indexes and found that that location no longer had any documents, then the index at the portal site gets wiped out. And then the next backup tape, where there's still no documents at that site, then the backup tape gets wiped out. So after two cycles of sweeping that site, if those documents disappear, they are gone to the world.

MS. TREICHEL: Yeah.

MR. GRASER: But in alternative number five, that's at that point I can't get rid of things now unless I get everybody's blessing to get them off an NRC resource machine. At least that's my understanding.

We got a couple records managers sitting in the back of the audience N back there and they're nodding heads yes and no occasionally, so I think I'm fairly close to home on that.

MR. HOYLE: Steve, I haven't heard your bottom line. I

1 think I know what it is. 2 MR. GRASER: I think we got your bottom line. 3 MR. FRISHMAN: What did you think it was? 4 MR. GRASER: Alternative one. And if I felt it absolutely 5 necessary three, then three, but --6 MR. HOYLE: Oh, I just didn't mark --7 MR. GRASER: But one is the one that you favor; right? 8 MR. FRISHMAN: Yeah. 9 MR. HOYLE: Sorry. 10 MR. FRISHMAN: What did you think it would be? 11 MR. HOYLE: One. 12 MR. FRISHMAN: Okay. 13 MR. GRASER: I guess you were successful in making your 14 point, Steve. 15 MR. HOYLE: And DOE is going to let us know after Dan --16 MS. NEWBURY: No, I already voted for one. 17 MR. HOYLE: You did vote for one? 18 MS. NEWBURY: Yeah. 19 MR. HOYLE: See how sharp I am. 20 MR. FRISHMAN: Actually, we're just getting an opportunity 21 to change our votes. 22 MS. NEWBURY: It's so rarely I have an opportunity to agree 23 with you that I --24 MR. HOYLE: There are two members of the panel that aren't 25 present. The nuclear industry has not a representative here, nor does the National Congress of American Indians. So I believe I will need to contact both of them with the results that we have now and see if they  $^{
m L}$  wish to join in on this.  $\mathbf{E}$ I've got no one saying okay to two, and three I have Dan and Steve, if Dan feels strongly.

RIII EY & ASS All right. What else do you need from us, Dan?

MR. GRASER: Well, I just wanted to put this in a frame of reference for everybody in terms of walking through the next steps in the process here so you will understand --

 $$\operatorname{MR}.$$  HOYLE: Did I get that right? FEMALE VOICE: Yeah. One and two rose from the ashes.

MR. GRASER: There you go. Isn't life strange.

MR. HOYLE: Start with bullet two.

MR. GRASER: Bullet two, we'll start with bullet two.

I just wanted to kind of fill you in on the next steps here, what's going to happen with this. As the rule indicates, I need to take into consideration the opinions expressed by the advisory review panel.

And, you know, represent those non-consensus type opinions and take them into full consideration.

Now the way that's going to happen is that as I come back from here, I'm now going to be in a position to say to the commission of all of the alternatives, the strongest sentiment was in favor of number five and there was a secondary level of sentiment for alternative number three. And I'm going to then go back and start to put together what NRC -- well, first of all, I need to make a presentation to the NRC's information technology business council. This is an internal organization that asks me all sorts of hard questions about did you consider this, did you consider that, have you coordinated this with other internal NRC offices, and so forth.

And I'll be making that presentation to them on March 5<sup>th</sup>.

And I will be able to represent to them in -- or March 1<sup>st</sup>, in the March

1<sup>st</sup> meeting, that we have at least gotten a very good sounding back from

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L the advisory review panel in terms of the alternatives that they feel we should be pursuing, the design alternatives.

Then we're going to take this information and we're going to

AN RII EY & AS prepare what's called a capital planning and investment control document. The capital planning and investment control document is something that's required by the Information Technology Management Reform Act, ITMRA, from a few years back. That capital planning and investment control document is in essence an analysis of benefits and costs, and also a project management plan.

So for people who've been involved in major projects, they take those two products and they mash them together. And it forces you to present the business case for whichever alternatives you're presenting to the commission and examine all of the aspects; here are the funding aspects, here are the cost aspects of it, here are the risk factors associated, being able to meet your schedule, being able to do it within budget, is it going to fulfill the mission, have you involved stakeholders. You have to address all of these factors and then present all of this to NRC's executive council.

The executive council reads the document, we give presentations on it, and at the end of that process they say to me, okay, we will approve the project. We've looked at all of the analyses you've done, we've looked at the projected life cycle costs. We still have a couple of issues here that we need to work out in terms of your annual fiscal year budgeting and so forth, but generally you have the authorization to go ahead and proceed with alternative A, or alternative B. Or they may in fact come back and say to me, we, you know, we want you to further explore the possibility of outsourcing the placement of the server and so forth, and give us a cost benefit analysis of lease versus maintain and operate it yourself.

So I will do those, and then the commission or the executive  $^{\rm L}$  council will come back and give me the authorization to commence the first phase of the project. And we have some fiscal year funds still  $^{\rm S}$  available this fiscal year which can be used to start the process of

designing the system. And we would have to put together a project management plan, so forth and so on.

Now what this means to all of you is that the internal NRC process has its own set of pitfalls that could befall us as a project. They could come back and say well, thank you very much. We're glad you're making this recommendation, but this is the one we're going to fund. That can still happen.

And if that happens, my intention will be to communicate back to everybody in the advisory review panel through John what the results were of the meetings with the information technology business council, and also any feedback that we get from the commission in terms of the options and alternatives that they direct us to implement or which they say this is what we are willing to fund.

And if those differ significantly from the intent of the desires expressed by the advisory panel, I think you folks need to know how that decision came to be, you know, what -- where was it made; why was it made; why, if we wanted alternative one, how come they said let's do alternative five; or if we said let's do alternative five, why did they pick three.

And as a result of that process, I'm just giving you some advance understanding that the commission at the executive level can come back and give me back marching orders that may not be completely harmonious with the expressed interests of the advisory review panel. And I will make every effort to keep you informed of how we get from point A to point B or point C. Whatever iterations happen along the way, I will endeavor to keep everybody informed so that there's no mystery as to understanding how any decision processes came out in the final end.

It may be that the executive council goes ahead and decides to fund alternative five in full funding and directs me to go ahead and

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implement that. And if that's the case, then I will come back and report to you that that's what they directed me to do.

So that's where all of this goes. The -- you all understand the next two or three months now is going to be an internal process where I'm going to be dealing at fairly high levels within the commission to go ahead and get the authorization on the project. That's essentially what I had.

The only other issue in terms of the functional requirements -- I've got functional requirements, bullet number two, that I was supposed to start off with. The functional requirements, obviously now if we're going to go back and either examine alternative one as the number that most people mention being in support of, or alternative number five as the second-most mentioned alternative, in either one of those cases I think the functional requirements are going to need a further round of tailoring. Especially if you pursue alternative one, the functional requirements list is going to be cut down extensively.

And I would ask that we be allowed to have the technical working group continue to provide input and review and commentary on the functional requirements, so I'm asking the advisory panel to allow us to go ahead and continue using the technical working group to get the functional requirements honed in to whichever solution the final letter recommends back to the commission.

MR. HOYLE: Do I hear any objection?

MS. NEWBURY: I just have comment. I'd like to see a little bit different group of people looking at those functional requirements so we get the functional requirements that are reflected by the members of this group. For instance, the State was not a member of the technical working group, and I'd like to get a little bit different state. Viewpoint on what the actual functional requirements are, I guess my

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point is. Not from a computer support point of view, but from a user point of view.

MR. HOYLE: Dan, you have a methodology for obtaining that?

MR. GRASER: The functional requirements could certainly be made available to any audience that the ARP chooses to make them available to. Simply, disseminating them out and asking for the advisory review panel to give me their comments, given the relatively small number of ARP individuals, is probably workable. But sooner or later somebody is going to have to go through and look at conflicting interpretations of what the functional requirement is. DOE may have one aspect of a functional requirement and the State of Nevada may come in and have a totally different perspective on that, so sooner or later you're going to have to negotiate and arbitrate what is the functional requirement.

So I could certainly send it out to all of the ARP members. And if everybody is in perfect harmony, that's fine. But we shouldn't do it without leaving -- without having some mechanism for resolving those.

MS. NEWBURY: I wasn't suggesting that you not meet. I was just suggesting that perhaps some additional people should be in the technical working group during those discussions.

MR. GRASER: Oh, that would be wonderful. That would be wonderful. Technical working group is open to anybody that wants to attend.

MR. BECHTEL: When do you see the next meeting of that?

MR. GRASER: Well, again, my inclination was that if the functional requirements were going to be focused on a portal type solution, that we may be able to bring closure to the functional requirements through e-mail. Obviously if we're going to be looking at alternative number one, we're talking about a much scaled back

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characterization of a system functionality. And in that regard, then we probably would need an additional face-to-face meeting at that point to try to build from the ground up, rather than peel from the old LSS requirements down.

And, you know, if there's a consensus that you want to have another face-to-face technical working group meeting out here, I could certainly go back and work towards scheduling that. I'd be glad to do that, if that's everybody's opinion. And like I said, if anybody wants to be involved in that and have representation on it, that would be a wonderful thing.

So shall I take that as a marching order to go out and propose a calendar date for when we could sit back down and look at the functional requirements sometime after John crafts the ARP letter back to NRC in terms of expressing the intentions of the advisory panel? And then I'll go ahead and attempt to set up a date, and we'll attempt to do another round of face-to-face meetings out here with technical working group members focusing on the functional requirements for the candidate system.

MR. HOYLE: Okay. And, Steve, I do hear Claudia urging that the State see if they have someone that could attend?

MR. FRISHMAN: Yeah, I caught that.

MR. HOYLE: Take a look at the date and whatever resources.

MR. FRISHMAN: Yeah. The last one -- yeah, the last one I knew was a conflict for me and schedules.

MR. HOYLE: Thank you.

I'm going to then not suggest any next date for a ARP meeting until we march along a little further, but I'm open to  $^{
m L}$  suggestions. If you want a marker in the fall or something, we could do that.

MR. GRASER: Well, I think the way things are getting with

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the NRC budget as well, that it may be next fiscal year anyhow before we have enough travel budget to send out another contingent.

MR. HOYLE: Okay. Is there another business from the members?

MR. GRASER: I would just like to just generally thank everybody today for coming to the ARP meeting. I would like to thank everybody for your very sincere and thoughtful comments. I appreciate it very much. And I promise you I will give them very careful consideration. Thank you. Thank you very much.

MR. HOYLE: Dennis.

MR. BECHTEL: Like to just thank Dan and staff. You obviously, you know, you did a lot of hard work and, you know, distribute documents in a timely way, and having many hats, you know, I really appreciate that. So thanks.

MR. GRASER: One other note, John. A number of individuals have mentioned to me that the transcript of the last ARP meeting didn't make its way around. Some individuals did not receive copies of the transcript of the last ARP meeting. And I would just like to let everybody know that if you don't receive an electronic and/or paper version of the transcript of the proceedings in about a week's time or so --

MR. HOYLE: Ten days.

MR. GRASER: In a week's time or so, that please let me know. Just send me an e-mail back and say when's the transcript going to be available, and that will wake me up and I will make sure that we get the transcripts out to everybody.

MR. HOYLE: Okay. Is there anyone present not at this table  $^{
m L}$  who would like to make a statement?

Dr. Nartker.

DR. NARTKER: Is this on?

MR. GRASER: Absolutely.

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MR. HOYLE: Yes, sir.

DR. NARTKER: I'm Tom Nartker. And I teach at UNLV, and I also serve on the technical working group a bit. But I've been sitting listening and I would like to say something, not as a member of the technical working group, but as a citizen of Clark County. I have two things to say and one request to make.

First, it seems to me that there -- the scientific issues involved in Yucca Mountain and in collecting the information the DOE and NRC and others have collected is enormous. The complexity is just fantastic. The number of issues involved and the interrelation of those issues is beyond any one human individual's capability to digest. And so we have millions, probably over 10 million pages of documents to make available, and that complexity is just enormous.

The second point I would make is that for us citizens of Clark County, important things are going on here. And this is, you know, the deliberations that are involved are going to mean things for a long number of years and are really, really important things.

And the third thing I would say is to request that in the light of this complexity and this importance, that it bothers me that this panel is so concerned about a few dollars. I have listened for several hours to people worry about a plus or minus a few dollars. And we're talking about a very long number of years for us folks in Clark County and others in Nevada, and I personally don't care if it costs the Nuclear Regulatory Commission a million dollars. I don't care if it costs Clark County a million dollars or more. You can up my taxes. Okay?

These are important things, and I think that the dollars we're talking about are not important. What you should be talking about is what's the best technology that can be provided to make this

information available. Thank you. MR. HOYLE: Thank you very much, Dr. Nartker. Any other comment? All right. I'd say we're adjourned then. Thank you very, very much for your attendance. [Whereupon, at 3:50 p.m., the meeting was concluded.] ANN RIL E? &