JERE CONFREY: I have six terrific colleagues here who have a lot to share with people, and the way we thought we would do it is we were going to use 25-minute time slots. I'm going to be really strict cause Hilda's in that last time slot and we've all done that many, many times and watched it end up being shorter and shorter and shorter. So 25 minutes will be the whole interaction. And so questions will be included. About 12 minutes of presentation and then 25 minutes including questions. When the people come up, I'm asking the panelists to let you all know if they're inviting questions as comments during the presentation or whether they would prefer to have you wait till the end to ask your questions so that we can try to move to maybe a little more interactivity around some of the issues if we're willing to give up on our total agendas here. And also I'm going to ask the panelists to get up five minutes before if they're doing a computer switch so they can make the shift, and we won't lose time in between. So that way hopefully we'll manage to have more interactions. So we have a terrific panel up here, and I suspect in this small of a group we all know each other enough, and we did the early introductions. So I won't introduce each person. They can do that as they come up and just sort of jump into the issue. And I think it will
be interesting to see how this afternoon will be both similar and different I think from the presentation this morning. So I have to admit that when I came here I wasn't really sure what my beliefs were about the possibility of creating standards for video. And I'm finding it becoming more and more defined as we have these discussions. I found some of the comments that we had this morning and ideas particularly compelling. And one of the things it seems to me that we're seeing is we're almost engaged in a form of what Rogers was pointing out, comparative cases as we look across these different examples. And I think that as we sort of figure out the different panels and the way the panel structure's been organized, we may also be engaged in Tim's guided dissection here.

I find the conversations so far to be interesting in that I would characterize them as being either highly generalized or highly specific. And I find it interesting that we have -- I would make maybe the claim that we have trouble calibrating in the middle of those two things. And I think that's an interesting territory to think of that as the nature of going to try and create standards. I was very impressed as I have been other times by Chuck's characterization of a broad frame for this kind of work in terms of trying to kind of understand. And I can't do it
the way you do it, Chuck, cause you say it way too fast, and I couldn't write it down fast enough. And I talk fast so. But this sort of notion of human beings who are engaged in this sort of human cognition, language embedded and structures and trying to sort of work out this purposeful action and consequential collaborative actions. That's a really -- his statement of that which I'd love to get off the video and do the right one was a really compelling notion of a broad frame for something that I think we could all agree that that's the kind of work we're interested in. Now, that said I think our panel's as a panel on classroom and teacher learning and the use of video in that context also has some other perhaps narrower perspectives that come out. And that includes what I've found myself wanting to talk about for this discussion was the notion of the tension that we feel between innovation in our field. How do we help people innovate in their classrooms? And something I'm going to call commensurability and that is how does what we're learning about fit into the larger framework of classroom practice and research? And it seems to me that when we do research in an arena that's broad, like for me math education, I'm constantly trying to deal with the tension between those two things.
So one of the things that Sharon's talk helped me do this morning was to begin to articulate for myself what I think might be some reasons for doing this effort but from making this effort to try and figure out how we can talk about standards in a satisfying way. And I think that the things that are coming up for me, well, one is a doctoral education. I think it is true that we all experience the tension of trying to help doctoral students engage in this kind of work in a more efficient way so we can concentrate on their topics and their problems they're working on and not just their methodologies. Secondly, I do think the issue of long term instrumentation is something that calls for this kind of standards. Thirdly, it seems to me it's so important that the progress of experts that we figure out how to better share what we've learned. And we just take for granted. That's not really what we talk about. We just know to do certain things certain ways because we've done it so often. Fourthly, the issue of cross-disciplinary exchange among video users that within this community we have very different definitions of whether we're trying to look at emergent behaviors or whether we're trying to look for something that we're bringing in with us, sort of the distinction Fred was making about the is it coming out from the study or are you
coming in with particular points of view. And the last one I think that's really important to talk about, I suppose it comes from my experience of being on that NRC Panel on Scientific Research in Education, but also having shared the NRC study on Effectiveness of Curriculum Research, and that is I think we have to have more explicit discussion about our places and links to other types of research and practice. I think we have to position ourselves in relation to that broader community. So I think that's a conversation I hope we can get into.

So as we talk about his, now, I share Fred's concern which I made slightly differently than he did, but that is in some sense video is a technique. It's not even methodology. And so in what sense do you drive a discussion of standards from a technique rather than from a methodology or even a theory. And I think that's a very hard question, one which a broader description of a shared goal might have to be negotiated before we can actually make progress on that if you think it's worthwhile. Now, moving into the classroom research issue and teacher studies, there are a variety of these kinds of studies, and we've asked the panel to speak to the different kinds of studies that you can do. One would be design studies. Another would be interaction or discourse studies.
Another, which hasn't been represented is curricular studies, and there's a lot of press right now to talk about the notion of implementation fidelity when you're trying to judge the effectiveness of curriculum. And even if you want to take an adaptation point of view on that rather than a fidelity point of view, some measure of whether what's happening in the classroom has consistency across sites is essential. And then there's the study of teaching, teacher decision making and the potential use of video in professional development type circumstances. So there's a lot of kinds within the panel's background and expertise.

What specific roles, we asked them to address the question of what specific roles it plays. And lots of times in our work, we go from whole class studies to particular groups. We may be focusing on the teacher or all of those. And as people said before, the duration of data gathering can go from something like three weeks or five observations up to I still think I'm close on the record with my three-year teaching experiment. And, boy, that's a lot of video on the shelves. It pretty much uses up a chunk of the study. And the question of what gets analyzed. Is it going to be a microanalysis, a macroanalysis or is it episodic, and if it's episodic, how
are you choosing this? So from that to begin to try and move towards answering the question within those varieties, I would suggest that we might think about the idea of how does video inform our theory? So I'm really kind of working with the theory, one of Fred's more -- which is more consistent with my own work as a math educator. And in coming in that area, I found Doug's question this morning or his observation this morning fascinating about the way in which there was strong respect for the professionalism of the groups that were being studied and such that one's trying genuinely to understand what's going on. And there's a very strong descriptive quality to that kind of work. It seems to me that when you're trying to do this kind of video research that's certainly got an important place and noticing is a tremendously powerful theory of change that when people notice they can begin to change and they may change what they're doing. I think there's other things that we do in the field using video which may include explaining, understanding, improving, justifying, convincing, and we need to consider the use of video in the full framework of those different activities I think as we try to think about what we're doing. And it may force us to articulate more explicitly what our theory of change really is about how this is supposed to engage in
interactive practice.

So at least for my own work, I do what I call conjecture driven design studies or teaching experiments where because you're trying to study how learning certain concepts form over long periods of time. So you need these long, longitudinal kinds of development to study. And the second thing within that is and, therefore, the conjectures are changing but they're explicit so that each time you try to test it, you're revising it and stating it again. Within that content plays a very serious role and I think more directly than maybe some of what came out with some of the morning discussions but where there's some real shared overlap is on things like the development of inscriptions and representations. I mean that is so key in watching how people build their concepts that again, just as we heard this morning, we pay incredibly close attention to that. But we're also asking the shared question of how do people develop proficiency. It's also really important in our work to pay attention to student conceptions and so, therefore, a lot of the work for both the researcher and for how we work with teachers is talking about how people learn to decenter and listen. And in that sense, we get into these discourse frames and the sense of how is it that you've understood somebody else. And particularly in math
and science, how do you get rid of that frame of your training in math and science? Not rid of it, but how do you push it back a bit so that you can actually hear innovations without having it be forced into seeing it only as you were trained to seeing it. And in my own work, I use a notion of voice and perspective to do that where I think of it is a dialectic between my own training. And finally, you have the question of what are the participatory structures and how do those participatory structures in classrooms end up mirroring and leading to participation in the fields and becoming mathematicians or scientists and pipeline kinds of issues and all the issues, therefore, connected with equity.

The other question I hope we can thing about is what's the role of video work within the larger array of methodologies. And there's two parts to that question. One of them is what are the other methodologies we tend to use when we use video such as the use of embedded assessments or pre and posttests. But there's also the question of the role of the video itself within effectiveness studies. There's a lot of writing right now coming out of Department of Education that suggests this kind of work is prior work and it can be done in this incredibly short timeframe of about a year, and then we
ought to be able to scale up. And we need to really think about how to respond to the fact that that's not the kind of multiple method -- I don't think that's the kind of multiple methodologies we ought to have. We tried to make that point on our curriculum effectiveness report that there's more of a parallel structure than this kind of a staging structure that's implicit. Creating cases for teacher education is another one the panelists are much better qualified than I to talk about.

So how do we get to the notion of standards? And I think part of that is a question of how do we make claims. I think that's sort of the fundamental idea that I want us to put forward. So some of the things that I thought about in that partly prior to this and partly from the comments people have made this morning, and one is the issue is what's the relevance of explicit theories. What's our own positioning? How do we collect our data in terms of time scales perspectives, certainly the issues of consent and how do you get good data, the notions of indexing, the notion of data selection, reduction and compacting and how you go about doing that, transcription. And then the big issue which was again I thought that Rogers raised it most explicitly to my use this morning which is this notion of comparative cases. I mean it could
be comparative cases, it could be developmental cases and what does it mean to build in coherence. What does it mean to find counterexamples? What does it mean to identify units of analysis, time scales, groupings, choices of language and how do we handle contextualization? And then finally this issue of communicating results. How do we notate those results? How do we edit? How do we trade off between vividness and generalization and what are the different kinds of publication forms? So that is a shot to sort of framing the panel in terms of suggesting that these kinds of issues might be ways to address how different scholars in the field have responded to the questions of what kinds of video use do they have. What roles does it play? How does it inform theory? And what's its role in a larger set of methodologies and what would it mean to do standards? And the last one I just want to end with which is we need to spend time here talking about this question of it's hard to talk directly about what standards might be, but I think if we can continue to clarify why standards might serve us in doing our work and people around us doing our work, we might get some agreement on that. And then that might suggest some of the notions of moving forward. Okay. Well, we have about five or six minutes or seven minutes for questions. And, Roy, if you need a video
(inaudible). Why don't you go ahead and set up?

ROY PEA: Sure.

JERE CONFREY: So do you have any questions as we transition to Roy P? Yeah, Fred?

FREDRICK ERICKSON: How about if we keep in mind the question also why might we not want standards (inaudible).

JERE CONFREY: That's fair. Yeah?

AUDIENCE MEMBER: Is there any time allocated to talking about standards?

JERE CONFREY: That needs to go to the organizers, right, cause --

FEMALE SPEAKER: Tomorrow.

AUDIENCE MEMBER: Oh.

JERE CONFREY: Ken?

KEN HAY: Yeah. Along the line of Fred's comments about how standards serve us and what serves us about standards, I opened a page in my notebook here labeled anti-standards. And the idea of this, you know, was to say if we have a list of standards there might also be something that says nothing in this list of standards shall be construed as, you know, forbidding innovations of the delivery kind as opposed to accidental clownering around cause you don't know what you're doing and so forth. And just thinking about what might go in such a list, a list of
anti-standards to accompany the standards.

BRIGID BARRON: Yeah, Tim?

TIM KOSCHMANN: Just a question. You stated as one of the themes that you would like to have taken up in the panel to follow that you'd like an explication of what the role of theory is. And as you know, this is a question that I've struggled with myself, and I think certainly one of the things that we need to clarify is what kind of theories are we talking about. There are theories of learning, theories of pedagogy, theories of communication, theories that all bear in some important way on this stuff and which of those, if any, are we to attend to here.

JERE CONFREY: And is there a way to again allow for the (inaudible) but at the same time recognize at some meta level how (inaudible) are reacting with those theories or what those theories share across these different perspectives. Because there's something about the whole issue of complexity and the belief that you can't understand interaction, you can't understand what's going on cognitively without understanding interactions in the context that we share. Right? And that's part of the reason that videos are sort of our record of choice. So, you know, it seems to me that we don't have to let our individual thing win. We have to figure out what we're
willing to see as common that captures enough of what we have so that we're able to -- I mean you still will do your own theory of informing, but there is a fair amount of commonality across those perspectives I think. Yeah, Jay?

JAY LEMKE: I've responded to what you said about the tendency to either make very general statements about these things (inaudible) in very microscopic detail and to call for things in the middle. Could you give an example of the kind of thing that is in the middle for you?

JERE CONFREY: I think that, well, the easy example would be some of the things we've made, these boundary objects, right? But in a more fundamental way, I think, for instance, pushing on the notion of comparative cases in what Rogers was putting forward, why cases? What's the histimology behind this that makes us say the unit's got to be case as opposed to, you know, a set of answers to a kind of question. And why comparative? How are we getting our purchase by the notion of comparison? For me it might be the notion of conceptual corridors. What's corridor like about it? And what gives it the coherence over time for me to do what you call cherry picking, right, within a theory based. So that's the more interesting ones to me. But then I think some of the categories that Sharon gave us of saying, okay, if you look at that from the perspective of
say these different hats, okay, I want to give you one more which is I think Doug raised the issue and I still don't have (inaudible) about it, but we have a different notion of the relation between practice and research. And he tapped into a bit of it when he started talking to us about the kind of relationship and who's learning from who. But I think that's one that we could impact much more closely in terms of -- because you'll see how these people view teachers as co-professionals I'm sure as people talk and (inaudible) about the teacher (inaudible) here. Okay. Is she here? So.