SHARON DERRY: Well thank you for that wonderful introduction. I actually consider myself to be the person who will just activate some prior knowledge and start a conversation. And I'll raise a few issues and you should feel free to disagree and I hope you will. It already seems like a lively group so I think we'll be just fine. And I think this meeting is, if I can bring up my presentation here. I think this meeting is really an important one and it is organized to address a question that NSF would like us to address. And it's can we establish standards for videography research.

And when I started working on this analysis and presentation I actually felt I don't think we can. But as I looked into it a little more deeply I began to feel quite positive about the idea. And I'd just like to share some thoughts with you and hopefully start some discussion and debate about the issue. But what we're trying to do here in the end is accomplish a white paper that will make a statement about this that will provide some guidance to the foundation and to other researchers.

So conference questions, what is the potential of videography research to improve stem education and two, can we develop standards for guiding future research, calls for funding and proposal evaluation. That's my interpretation
of what our charge is. And there are a lot of important concerns motivating this quest for standards. Some of the most obvious ones are resource issues. We are all spending a lot of time, a lot of funding on developing and collecting video. And a question that comes up frequently is there duplication of effort? Is there a possibility of sharing? If not knowledge, actual video libraries. What are the issues involved in that? There are quality issues. What's good video research? Are we doing it? Do we know what it is? And then there's some desire to orchestrate our distributed expertise to shed some light on these issues and some need for doing a problem analysis of this issue.

And so I've started a little bit of my thinking about that because I think there are a number of challenges for setting standards that we're going to have address. For one thing the cultures of educational research are diverse, and they seemingly disagree. And this was really brought home to me in recent times at a conference that Tim Koschmann sponsored at Allerton where a group of people came together to analyze video that was produced by an excellent research team.

And a great deal of the discussion at that conference was supposed to be about different points of view,
different perspectives on this analysis. And yet a great deal of discussion at the conference turned out to be why I can't do my analysis with this video because it doesn't provide me with what I need to see. And so standards came up there as a possible way of solving this problem, but would those standards meet the needs of everyone involved.

So there are many types of standards. That's another issue. When you talk about what standards are you can find plenty of different definitions and points of view on what we're talking about. And these standards regardless of definitions usually required tradeoffs and compromises among the people developing them. And gee educational researches aren't really great at making those kinds of compromises. They really do resist standardization.

And so I've made up a little poem about educational researchers that I think might represent our situation. First of all I think that we all, as I'm a learning scientist, I think of myself as a learning scientist as many of you do. And I think that I wear many video hats. Some more often than others. I put on a hat as a researcher, as a producer, as a developer, as a technologist and we all tend to wear multiple hats, some more than others.

We're all unpredictable creative cats who never, never
hang together like bats but deeply engrossed in our own ritual chats like our different methods, tools and formats. And so we have to say that this is a very complicated culture, a very complicated set of ideas in trying to bring those together and form standards is a major challenge just because of who we are. So I would like to talk today about our different video hats that we wear to different degrees. And I'll be saying something else about the cats who wear the hats.

So here are the different hats of educational research, researcher, teacher, producer, technologist and there may well be others. But these are the four that I would like to focus on today. Researcher hat. We all wear that, most primarily. And this research that we do has many, many dimensions, and these are just examples. We work in different time scales, analytical levels and grain sizes from five minute interactions to entire school years are recorded for analysis, from micro sociology to macro sociology, small social groups to entire villages are studied. And these are just a few examples.

So there are many time scales, many analytical levels, grade sizes. So trying to develop standards we have to keep that in mind. Many theoretical perspectives, again just a few examples. Some of us work from the perspective
of distributed cognition, cognitive approaches to collaborative learning. Others would hate that approach. But rather use activity theory and so forth. We have many, many different research questions. Here are again just a very, very few examples, understanding role of gesture in mathematical communication.

It is a program that Mitch Nathan and Martha Alabalie participated in from Wisconsin, my home showing how micro social encounters translate to broad panders of any quality. Some wonderful work by Fred Erickson in that line. Examining role of boundary objects and interdisciplinary problem solving, something I’ve been interested in in recent years. We have many different methods. And this is a partial list again. And they way this list was developed is I started out with two or three and every time I showed this slide at a meeting someone yelled out well you forgot cognitive ethnography or how about the fact that I just looked, count, stared and prayed.

And so this list could go on and it could get longer today but the point is that we have many different approaches and debates about those approaches. And so it’s a complicate thing from our cultural perspective. What does this do to our doctoral students? Well this is what
one recently said to me. She asked me not mention her name. She’s actually working with data from a video library. She is doing some retrospective interviews of the people involved and she is working with a research group that she meets with weekly. And they do some interaction analysis together. But nevertheless her feeling is one of great isolation and some confusion.

How to proceed -- with all that guidance I don’t know how she could possible be confused. This is actually a published account despite the successful outcome of the project and the many personal rewards and moments of joy, suffering in these (inaudible) are my own. Suffering was my top most dominating feeling during my dissertation process. I realized that my intense participation in these two domains in related communities, which was the community she was studying as well as her research community, literally almost paralyzed my participation in other domains of my person life.

So I’ve, I’ve heard numerous program officers from NSF say we need guidance, we need help for graduate students. It seems that every doctoral student today is doing some form of video analysis from this field, very doctoral student. And they are struggling in trying to help them as part of the agenda. So (inaudible) starts this marginality
is a powerful, powerful experience and I’m going to come back to this point later. But I think that this issue is possibly part of the standards problem. So I just raised that for your consideration.

Now if we’re going to have standards we have to have an idea of what standards are and certainly this is one, one kind of standard that we all know about. And I’ll just say right away I don’t think that’s kind of standard that we’re talking about. Nothing such as the US Department of Commerce has established and will maintain scientific and technical standards for our work. I don’t think that’s it.

So I look at Funk and Wagnels and here are some of the definitions that seem to apply and I, I sort of focused on these two. The first -- the fifth definition is a noun, a type, model or example for comparison, a criteria of excellence, test a standard of conduct or taste. And so the though there being perhaps we can have some examples or some cases that represent models of good work.

I thought this one was reasonable, having the accuracy or authority of a standard serving as a gauge, test or model of recognized excellence. And of course I had to go to Wikipedia and here’s some ideas from that source. And I thought these were quite appropriate, a concrete example of an item or a specification against which all others may
be measured well. We can consider that. Certainly the idea of examples seems appropriate. A set of properties that a product or service should have. Is that part of our charge? I don’t know. I will raise that question again.

Wikipedia emphasized that there are these things called voluntary standards to which the producers adhere voluntarily. Substandards are laid down by an organization, gathering representatives are producers and users of the type of product or service. And so keeping some of the these items about standards in mind the question we’ll address is do we want to develop some of these types of standards? So I’m going to shamelessly promote a book in progress that Ricki Goldmann, (inaudible), Bridget Barron and I are currently editing because I think that one thing we can say about this book is that it contains some good cases, some ideas, some possible standards for video research.

And we’ve actually organized this conference somewhat similar to the structure of this book. The book has several sections, three of them include cases of good video research in informal and naturalistic settings, cases of the video research related to teacher in classroom learning and a section on technology futures. And some of the editors are here and will be chairing those panels in this
session.

Now I emphasized this one in particular because I believe more than any other section in our book and perhaps within that community, those people tend to make the nature of their struggles public. They have struggled to achieve some methodologies. They have struggled to figure out some things about this video research. And some of those struggles are, are talked about or discussed in this book. And I think making those struggles public is a good thing and it’s a good thing for students I think because it isn’t a problem that’s solved. It’s a problem that people are still continuing to struggle with. Pardon me, I need some water.

I think another thing that that particular section of the book emphasizes is this, this strength of community, the importance of community. Sitting in a cave and staring at video is very different than involving others in the process of, of video analysis. And the methodologies that are discussed and developed within that section do in fact bring forth this idea, the importance of involving a community and analysis.

I’d like now to talk a little bit about the teacher hat. We all wear the teacher hat and to some degree in addition to the researcher hat. And we have a lot of work
we do with K through 12 teachers and teachers that we collaborate with. So we’re teachers and we collaborate with teachers, and this experience enables us to ask questions about what kinds of standards might be appropriate for the teaching field.

So teachers that I work with and myself as a teacher ask this question. Where do I get video that meets my goals and my standards because K through 12 teachers do have to worry about the standards they are covering. They’re national standards, they’re local standards. Where do I find video that meets standards for my teaching domain? What video teaching methods should I use? There are many that are appropriate for video instruction, lesson study, reflective self-study, contrasting cases designs. Problem based learning uses video.

How can I use video to share my work as scholarship? Some wonderful work being done by teachers at all levels sharing their scholarship. And how can my students use video as a learning tool. So I think these are questions that teachers ask and I’m not going To bring up video because it would take too much time and we’ll see plenty of it in this meeting. But this is an example and it’s one discussed in the book as well. A person sharing her teaching experience on the web with video, her teaching
scholarship and there are many good examples from a project that’s sponsored by Carnegie Melon. There are wonderful examples --

MALE SPEAKER: (Inaudible).

SHARON DERRY: Carnegie Foundation, I’m sorry, you’re right. I, I apologize.

MALE SPEAKER: (Inaudible).

SHARON DERRY: Yes. But Carnegie Foundation and wonderful examples on other sources too such as math forum, wonderful work by teachers being published as video. So what do teachers need? Well they need some advice and ideas on design of video case base learning and some people notified me before the conference to say if you’re going to talk about that, I’m coming because I need to know about that. Access materials, access to materials that are indexed to the goals and standards of these teaching domains. They need to find the video that works for them. And that are accessed in terms of the preferred teaching methods because different video designs fit different forms of teaching.

Practical technical support for video access, storage and production and some systems for helping them publish their teaching scholarship. So I think these are the kinds of things I’ve heard teachers say they need. And so I
think that leads to some ideas about what kind of standards we might create if we’re wearing our teacher hats. We might ask for methods and materials accepted by educational research community. Am I doing the things that are acceptable in terms of instructional design?

Is my teaching a reflective design scholarship? Is the video I select matched to my goals and methods? Is the teacher proficient when the technology’s been enabled finding digital video materials, sharing teaching scholarship, producing her own or his own video resources. So these are the kinds of standards one might think about when one thinks about what is important in teaching.

So let’s look a little bit at the video producer. We all produce video at one time or another. Many teachers have produced video. As researchers we produce video. What is being produced in the video realm? Well certainly a lot of instructional cases. Those are different I think in case studies, although there are these sort of in between things as well. Research cases that serve for instruction, maybe not as well as they could if they were designed for instruction.

Certainly development of collections in libraries is going on everywhere for research, libraries for research. And the question I would ask is whose research, what kind
of research do these libraries serve. An important question to ask when a library undergoes development and design. And collections and libraries for teaching, and again whose goals, what form of teaching because I do feel this does influence the design of the video.

So some production questions are, do we do a lot of built in scaffolding when we create a video case. Do we do a lot of narration? Do we tell a story or do we try to create cases that actually don’t have a point of view or don’t have a perspective or can we even do that? What is the role of narrative? What is the role of perceptual enhancements such as Ray Spiro’s work that focuses attention on particular things. Whose point of view is represented and, and to what degree do we represent a point of view in video? Do we do many cases, small cases that illustrate very specific points or do we tell big stories, develop large long maxi cases?

Human subject regulations always come up. Where can I use this again? Am I going to be sued if this is put on the web and it’s used in a format that I didn’t expect? And most of all young researchers ask how the heck can I publish this stuff, if I create, if I spend time to create a case. I need, I need to get -- to have this included in my portfolio for promotion and tenure. Where can I publish
this and will it count? So towards some production standards.

We’re producing video, we’re producing libraries. A reasonable question might be asked, what research is going to be done with this video, if it’s intended for research. And will these productions meet the standards of the target research community because earlier I argued that the research community is very complicated. And the Allerton conference that Tim sponsored illustrates this idea that the video you create for your research may not work for another kind of research. What teaching goals and methods will video support? Will productions meet standards of target teaching communities, their goals, their methods?

What technology illiteracies for production, editing, storing and publishing are needed. If I’m going to produce video what is it that I need to know? How technologically literate do I have to be? What legal and ethical standards for protection of human subjects must be met? So those are the producer hats, researcher hats, teacher hats.

Now I’d like to talk a little bit about the technologist hat. And the questions I’ll ask are what kind of technologies are being developed, and here are just a few examples. We’ll see more, we’re hear more. Socio technical systems for instruction. A lot of funding going
toward that enterprise. Tools and socio technical systems for video analysis. Collaborative analysis, individual analysis. Tools and methods for data collection. We’ll here from Ken Hay for example about that and for more (inaudible).

Socio technical systems for archiving and accessing large data banks by (inaudible). We’ll talk about that issue. Systems supporting publication and sharing of video papers. So here are some standards questions that we might raise about technologies. What metadata standards will allow users to find, access and contribute video resources that match diverse needs. So how do we create systems that permit access and how do I contribute to those systems as a producer and developer and how do I use technologies? What technologies can facilitate my doing that? What instructional and research methods should interface design support on a large scale. So I’m thinking now about collaborative analysis technology such as David Woods is developing Transana.

What are socio technical design standards for supporting creative reflective adaptive user communities? And I emphasized earlier the importance of community and participating requires technologies that allow and facilitate that community building. How do we design to
meet legal and ethical standards for privacy that will repeatedly come up with every hat basically.

My colleague Gerbert Fisher likes to make this contrast and these are his diagrams. He talks about the difference between technology gift wrapping versus technology determinism. And one being that we’re simply taking technologies and gift wrapping things we use to do, always do, the teaching we did, the research we did, the methods that are going on. And the other end is that those technology people are way out there in front and they’re giving us all sorts of things, (inaudible) for example.

And so we should do the research that, that’s the technology. Well I, I would suggest that it should be a collaborative enterprise that neither of those ends of the spectrum will work for us. That teachers and technologists and producers and researchers really need to have a dialogue and of course that’s what this conference is all about. So I think that raises some new ideas and new definitions about standards. And I would like to suggest that standards might be boundary objects for interdisciplinary work. So we all do wear those hats but maybe we shouldn’t all wear all the hats. Maybe we should let some others wear some hats more than others,
specialized hats.

If so we’re talking about working across disciplines, rather than working tightly within our own labs. If I create technology and produce video and teach and conduct research in my lab and I wear all those hats at once, it’s not likely that I really need to talk to anyone else. And I think that we all tend to isolate in that way and there are many aspects of our culture that encourage that isolation. And trying to break out of that isolation might be part of the task that we need to have.

And developing standards might prove to be the kinds of boundary objects that would promote and encourage that kind of interdisciplinary work. Standards are ubiquitous in society. They’re infrastructural tools that create means of communication across different groups. And they facilitate communication across time scales, across geographic scales. And believe it or not they don’t entirely rely on consensus because they’re adapted locally and these are ideas again I come back to Susan Lee Star who points out that marginality is something that isolates us. But this boundary on (inaudible) marginality is also something that might bring us together.

And it will be a challenge partly because creating standards will probably require some tradeoffs. We might
have to give a little to get a little. And so I would like to provide that for your consideration. As we ask this question, what kinds of things might we standardize for videography research. And that’s that this conference is about. And I would like to invite you to participate and say what you have to say and we’re recording it.

And what we’re hoping to do is synthesize some knowledge and create a white paper which will be a first step. We’re not trying to write standards yet. We’re trying to analyze the problem I think. And we hope people at this meeting will help us do that. And I also invite those of you who are interested and I may even twist a few arms to participate with us in writing the white paper. So that’s all I have to say folks for now and I’d like to open the discussion to you. And I think we’re going to move pretty quickly to the next, to the first panel. But we’ll pause for just a minute to see if you have some comments and questions or issues at this point.

MALE SPEAKER: Nice job.

SHARON DERRY: Well thank you, thank you. Brian.

BRIAN MACWHINNEY: Yeah, I think standards are a great idea.

SHARON DERRY: Good.

BRIAN MACWHINNEY: (Inaudible) standards (inaudible).
SHARON DERRY: Good point. Any other comments? Jay?

JAY LEMKE: I very much liked your (inaudible) the notion of boundary objects and I was wondering if you had some ideas of potential kinds of boundaries that might circulate among people wearing different hats to perhaps help some of these consensus standards emerge?

SHARON DERRY: Well certainly Brian just suggested one kind of boundary object which would be data, video data but I think there are a lot of issues associated with the sharing of those boundary objects, not the least which are legal issues and addition to, to many other kinds of issues. I think that metadata which is not data but categories for describing structures that we might hold in common.

If we had for example focused on particular instructional methods, cognitive flexibility, hypertext, problem based learning, contrasting cases would be some examples. And we had some general ideas that these are the kinds of instructional approaches that we would most like to support. And then we might ask what kinds of standards for video would we need in order to appropriately support those approaches. We might also ask what kinds of interface designs do we need to support those approaches.

And then we start to standardize, and although people
obviously will adapt as they develop their own approaches and their own systems, but as we start to standardize interface designs the kinds of instruction that we're supporting we can begin develop systems of coding for video that would allow someone who wanted to support problem based learning to draw on certain video banks and certain domains.

Another boundary object would be national standards for science and mathematics instruction for example, coding our video according to those standards would be an appropriate thing to do I think. So those are the kinds of things that I, I would have in mind. I see a lot of possibilities for a kind of infrastructure. And I think these are category systems as Star describes and I think those would be very helpful even if they were only partially implemented, even if some of them could be addressed. And if we did it voluntarily this I think would go a long way. Yes.

MALE SPEAKER: I understand that we are focusing on here primarily just (inaudible) research but I think we also like to think about end user (inaudible) end user (inaudible) and because the foundation. But what we are really interested in doing is to -- in college, you know, those educators after (inaudible) and also outside media
like (inaudible) and to (inaudible) of their knowledge (inaudible). So, you know, whatever the (inaudible), should we, you know, use (inaudible) by these teachers --

SHARON DERRY: Sure.

MALE SPEAKER: -- to search, you know (inaudible) and use, you know, these wonderful educational (inaudible). You know that we (inaudible) (inaudible). So you know I would really like to think about going beyond the research community.

SHARON DERRY: Absolutely and I, I actually think of teachers as being members of the research community to a great degree. I would certainly like to encourage that way of thinking as much as possible. Lloyd.

LLOYD: (Inaudible).

SHARON DERRY: Absolutely. Good point. Yes.

LLOYD: (Inaudible).

SHARON DERRY: That's very important. In fact Kevin Miller was raising a similar issue earlier today. A very important point. Yeah, Brian?

BRIAN MACWHINNEY: Yeah, I mean so (inaudible) I'm trying -- now I'm (inaudible) are so we've actually, you know, there are some proposals about all of these things like we should have XML. We could use Quick Time, we could, you know -- or a variety of things. There's an
alternative to XML, consent forms, we put out examples of consent forms on the web, standards for privacy maintenance, methods for distributing systems for viewing things over the web, data transcription methods and so on. So all these actually -- there are proposals for all of them, you know, out there. (Inaudible) probably come under these.

SHARON DERRY: And so we need to communicate that more I think. Yeah, David, you had your up.

DAVID WOODS: Yeah, I was just going to suggest that software itself is also a significant boundary.

SHARON DERRY: That's right. Yes, you --

DAVID WOODS: (Inaudible).

SHARON DERRY: Yeah, taking Transana around and using it with many people. Jay, then Roy and then I think we probably are on a time schedule, right Barbara, we should move on. Jay?

JAY LEMKE: In the course of this discussion, which I think has been very useful, it made me think about the sorts of things that other such communities have done. And the final medical research community working through NIH about ten or more years ago created what they called the method (inaudible) which was an attempt to integrate and to categorize and searching system for a large biomedical
research data bases the various different kinds of terminologies used across various specialized fields and even the differences between what positions you used, what medical researchers used, what the nursing community used and so forth. And we might want to think about at what point we would be ready to undertake a project like that since it seems to me that we will hopefully need it eventually.

SHARON DERRY: Would you say that -- did you say method or medical? Method?

JAY LEMKE: Meta.

SHARON DERRY: Meta, meta thesaurus.

JAY LEMKE: Meta thesaurus.

SHARON DERRY: All right.

MALE SPEAKER: I know you're short on time, but I just want to say for the record (inaudible) but I have three reservations about your presentation. I think you produce a category of (inaudible) that is strung together solely on the technology called video. But then we're really talking about the profound (inaudible) objects, communities, tasks, purposes. And very often what I find is that we find a standard discourse proposed when the community is in a state of crisis with respect to (inaudible) as though we would have standards that would displace the exercise peer
review. Of course the exercise of peer review presents competence. (Inaudible) practice, the demand and so just I mean I heard a great deal of appreciation that's quite (inaudible) but I just want to register that we could also think differently the presentations (inaudible).

MALE SPEAKER: Just a second, very related to his comment. You mentioned remnant models in one of your slides --

SHARON DERRY: Yeah.

MALE SPEAKER: -- which is a concept of (inaudible). And, and Jim's right about how it is that collections of biological specimens can be repurposed for secondary analysis from very different theoretical perspectives without having to maintain those additional commitments. The history of the museum of (inaudible) which is what we started and Jim analyzed in the first (inaudible) on boundary objects is a really interesting history.

Joseph Gornel produces the collection in order to pursue a theory of evolution in the regional changes in the State of California. And that is blow totally apart by changes in the field of biology. So those critters which are still in drawers in that museum at Berkley are being reused for things that are -- that Gornel could never have imagined. And there's just a slight kind of horrifying
conclusion to this perhaps, people who are now using DNA
analysis methods open the drawers, take out the (inaudible)
and the various things, cut them up, take the material away
because in their view they're doing the final and
definitive analysis (inaudible), and there's nothing left
in the drawer. And the curators as a matter of (inaudible)
practice are horrified. So I think we should open up some
of these historical analogies and look more closely at
what's going on, I think the effort. So standards are an
interesting fact, you know.

SHARON DERRY: Yes and I actually do share some of
your discomfort in connecting a lot of things together
through the tool of, of video. And I have to say that
wasn't my idea but I, I jumped into it to see what could be
done. And I, I do have that -- I, I share that discomfort
with you and I know many people who do. That was both
interesting comments. I think that we should probably move
on. I did say that I would call on Roy. He had his hand
up earlier. Do you still have a comment?

ROY: I pass.

SHARON DERRY: Okay, he passes. All right, so our
first panel is chaired by Bridget Barron and I'll let her
introduce the participants.

Day 1 Tape 1/PAL/12-26