Ethics, Lies and Videotape...

Wendy E. Mackay
Rank Xerox Research Centre, Cambridge (EuroPARC)
61 Regent Street
Cambridge, UK CB2 1AB
mackay.chi@xerox.com

ABSTRACT
Videotape has become one of the CHI community's most useful technologies: it allows us to analyze users' interactions with computers, prototype new interfaces, and present the results of our research and technical innovations to others. But video is a double-edged sword. It is often misused, however unintentionally. How can we use it well, without compromising our integrity?

This paper presents actual examples of questionable videotaping practices. Next, it explains why we cannot simply borrow ethical guidelines from other professions. It concludes with a proposal for developing usable ethical guidelines for the capture, analysis and presentation of video.

KEYWORDS: HCI professional issues, video editing, ethics, social computing.

INTRODUCTION

The lights dim in the plenary talk at CHI'95. You settle back in your seat to hear from one of the early innovators in HCI - in fact, your former thesis advisor from a decade ago. As expected, he is an entertaining speaker. He quickly has the audience laughing as he shows videos of early interfaces and very perplexed users. Suddenly, you're not laughing. You see a familiar face projected on the 40 foot screen: it's you, ten years ago. You watch in horror as the 2500 members of the audience, now your peers and colleagues, laugh at your 'inept' use of the technology.

Could such a thing happen? It already has. What was the appropriate thing to do? Should the speaker have tried to discover if she were in the audience? Would 'informed consent' given ten years ago have been adequate? What were her rights? What was the audience's responsibility?

These are not easy questions and I won't presume to provide definitive answers. However, I think such examples can raise awareness of the issues facing the CHI community, as we increase our use of video for a wide range of activities. Sometimes, simply being sensitive to the problem is sufficient; other times, there is no clear course of action. In either case, I contend that we are obligated as a profession to try to deal with these issues as effectively as possible.

As a community, we must educate ourselves about potential misuse and encourage responsible behavior. We must also understand *who* we are trying to protect and the trade-offs in protecting one group versus another. We need comprehensive guidelines to help members of the HCI community make ethical decisions.

The next section challenges the perception that video can be treated as an objective record of events and then presents examples of questionable videotaping practices. I also discuss why the advent of digital video increases the potential for misuse. The subsequent section frames the discussion within a more general ethical framework. I briefly review the perspectives of other professional groups, particularly with respect to their use of video. The last section presents preliminary suggestions for handling video and proposes a strategy for developing more detailed guidelines for the HCI community.

VIDEO: OBJECTIVE OR SUBJECTIVE?

Video is a powerful medium: it can make a point or convince people in ways that other media cannot. Video captures aspects of human behavior, such as gaze and body language, that are not available in any other form. Somehow, video seems "real". Yet, perhaps it is too powerful. Just as statements taken out of context can be very damaging, so can video clips misconstrue events or violate the privacy of the subjects involved.

Researchers often treat videotaped records of human behavior as objective scientific data: they can be viewed repeatedly, individual events can be counted and findings can be verified independently by other researchers. Unfortunately, the appearance of objectivity is just that: an appearance. Someone must choose a location and field of view for the camera, which must include some and exclude other information. The choice of when to press the "record" button also includes and excludes information. More subtly, the context shared by the participants of the videotape may be difficult or impossible to capture and present to subsequent viewers.

The shared context can occur at various levels. For example, Clark & Schaefer (1989) examined conversations between people. If one person is explaining something, she looks to the other person for signs, such as a nod or "uh

huh" that he has understood sufficiently well for her to continue. She may not speak clearly but will continue if she is convinced that he is following her. Is she misspeaks, she may see him look puzzled and then smile, indicating that he has understood and she should continue. A camera shot of her face as she speaks will capture the exact words she spoke but not the shared understanding that evolved. The video records only the *fact* that she misspoke. Later, it could be used to "prove" that it was what she "really" meant.

Another problem arises when video captures conversations between people with shared prior experience, who speak in short-hand. In a live setting, an observer might be puzzled by what is meant or ask for clarification. With a video record, the same observer could view it repeatedly, develop a theory about the meaning and become convinced she understands, even if the participants meant something else.

People are used to being able to speak informally in daily conversation. Since both speakers and listeners know their memories can be unreliable, misunderstandings are usually cleared up through further discussion. When casual conversations are recorded, the ways of resolving misunderstandings changes. Suddenly, the speaker can no longer say "I didn't say that"; the videotaped record becomes an independent arbiter of what was said. But what was said is not the same as what was meant. Since people can change their minds over the course of a conversation, statements that seem to establish what the speaker 'really' meant distort the ongoing process of conversation.

Most people (except for politicians[1]) feel uncomfortable being recorded and change their usual behavior; they are not used to speaking "for the record". If electronic mail is notorious for generating misunderstandings due to informal writing, recorded casual speech is worse. Even speaking carefully can be dangerous, since viewers may interpret it as evidence of 'something to hide'. Broadcast media are thus subject to greater restrictions than print media. For example, "Recognizing the particular power of radio and television to influence public opinion, federal legislation was passed limiting the involvement of broadcasters in political camps." (Hall, 1978)

Recording video is only part of the problem. The audience and context in which the video is presented may also affect what is understood. For example, imagine recording a researcher's discussion of a new software interface that 'increases productivity'. This video, shown to employees who interpret "productivity" as a euphemism for layoffs, suddenly has a very different impact. The infamous "sound bite", in which a short clip is selected to represent a longer event, may distort the original message or make rare events appear representative. "TV news often avoids coverage of the story that doesn't have anything visual and too often makes editorial decisions based on the availability of pictures rather than true news value." (Hall, 1978, p.17)

These examples demonstrate the importance of context and how easily video can be misinterpreted, intentionally or not. Unfortunately, even people who recognize that a videotape is not an objective record find it easy to slip into thinking that it is somehow real. Video is powerful; care is required both in its production and its interpretation. The use of video raises ethical questions: we can look to the literature in ethical theory for help addressing them.

ETHICAL THEORY

The ethical literature is vast, with philosophical discussions dating back to Plato and Aristotle. According to Forester and Morrison (1990), most current professional ethical codes are influenced by three more modern perspectives: ethical relativism (Spinoza), consequentialism or utilitarianism (J.S. Mill) and deontologism (Kant). The latter two are most relevant for computer professionals: "Consequentialism says simply that an action is right or wrong depending upon its consequences, such as its effects on society. [...] By contrast, deontologism says that an action is right or wrong in itself. Deontologists stress the intrinsic character of an act and disregard motives or consequences." (Forester and Morrison, 1990, pp. 16-17)

Older, more established professions, such as medicine and law, provide codes of ethical practice for their members. Their goals are to establish their status as a profession, to regulate their membership and convince the public that they deserve to be self-regulating (Frankel, 1989). Some, such as Ladd (1980), dismiss the notion of organized professional ethics as having few benefits and real potential for harm, while others, such as Bagley (1977), argue that "a written code is a necessity". Luegenbiehl (1992) argues that "Codes of ethics need be neither authoritarian nor designed for the enhancement of a profession. Instead, they should help the professional seeking to engage in ethical practice".

Computer science is a relatively new field but already has a large literature on ethics and computing. (See recent books by Forester and Morrison (1990), Johnson (1994) and Dunlop and Kling (1991).) Martin and Martin (1994) compare four codes of ethics: ACM (1992), IEEE (1992), Data Processing Managers Association (DPMA, 1989) and the Institute for Certification of Computer Professionals (ICCP, 1989). The four codes are similar to each other and to other professional codes because they take a generic approach to ethics. Privacy and confidentiality of data were seen as the only elements that "reflect the unique ethical problems raised by computer technology" (Martin and Martin, 1994). Since video involves both privacy and confidentiality issues, ethical guidelines for HCI must go beyond general ethical codes.

[1] I suspect that the reason that political speeches sound so odd is that politicians have learned to speak entirely in "sound bites". Aware that most people will judge a speech from the short clips selected by the media for the evening news, politicians learn to speak in short phrases that will sound good, even when taken out of context. Unfortunately, most people have no experience talking this way and often find themselves looking ridiculous when interviewed.

The ACM Code of Ethics and Professional Conduct, revised in 1992, is generally considered to be the most complete. Anderson et al. (1992) state that the new ACM code "recognized the difficulty that ACM and other societies have in implementing an ethics review system and came to realize that self-regulation depends mostly on the consensus and commitment of its members to ethical behavior". Like Luegenbiehl (1992), they argue that the most important function of a code of ethics is its role as an aid to individual decision-making. They illustrate ethical issues with nine cases that call for individuals to make ethical decisions. Each case has an individual scenario illustrating a typical decision point that relates to sections of the code.

Bok (1982) reported that over 12,000 distinct ethics courses, including law, medicine, business, engineering, liberal arts, research sciences, religion and philosophy, were taught in American academic institutions. Discussing case studies in the class room has been shown to be an effective teaching approach (Dunfee, 1986) and the SIGCAS newsletter regularly presents such ethical case studies for discussion (e.g., Gotterbarn, 1993). Rather than argue about the merits of different ethical philosophies, I have chosen to follow this strategy, presenting scenarios based on real events and proposing guidelines related to the capture, production and presentation of video.

QUESTIONABLE USES OF VIDEO

The following examples of questionable uses of video are based on actual incidents. However, some of the details have been changed to disguise the participants or setting.

Candid Camera?

Linda is preparing her CHI'95 presentation and wants to give an entertaining talk. She looks through her videotapes of user sessions and finds several funny clips of users doing unexpected things. At the talk, she makes a joke and shows the clip; the audience laughs.

Is Linda guilty of perpetuating a "candid camera" approach, in which research videos become transformed into a form of entertainment at the expense of users? Is this an appropriate activity for professionals who purport to support users? On the other hand, does this mean that we can't have entertaining CHI talks or videos?

Lack of permission?

Jane is a trained anthropologist who has just conducted a study of work practices within a corporation. She and her colleagues have videotaped a number of meetings in which sensitive issues, such as determining who should be laid off, have been discussed. The participants are very sensitive about being videotaped and have requested that the videotape not be shown to anyone else in the company. Later that year, Jane presents her work to at a workshop at a CHI conference and includes several clips of video taken from her research.

Is this a violation of her agreement with the participants in her study? Is there a way in which she can disguise the video to prevent any possible feedback from the research audience to the company?

Is the reviewer responsible?

Ralph is reviewing presentations for a workshop he is running. Several of the participants propose to show video of users involved in their work. He decides that it is the responsibility of the authors to obtain the appropriate permissions and does not ask whether the authors have permission to present the tapes in this forum.

What is the reviewer's role? Should he remind the authors of their obligations? Should he go further and request evidence of having obtained appropriate permissions? Under what circumstances should he reject a submission?

Wrong audience?

Fred is developing a technique for combining real data with video simulations to provide training for pilots. He takes data from the flight recorders of planes that have crashed and recreates the situation, including external weather conditions and instrument readings. He plays one of his recreated videos to human factors colleagues, who suddenly find themselves listening to the voice of a real pilot saying: "Oh my God!" followed by a scream and a crash. The audience is stunned. Suddenly the very personal experience of another human being's death was being presented to them, without warning, as a part of a training exercise.

Was it appropriate to show a sensitive video designed for one audience to another? Was this a violation of the dead pilot's privacy? Could he have presented his work to this audience without using the real tape?

Undue influence?

Harry conducts usability studies of new software products for his corporation. He videotapes each usability session and carefully analyzes what causes the user's problems and where they make errors. He then discusses the issues with the software developers. Harry is particularly annoyed by one feature and wants to convince the software developer that it should be changed in a particular way. He shows a video clip of one of the users struggling with the feature as proof that his way is better. He does not show other clips in which users do not experience problems with the feature.

Is Harry taking advantage of people's willingness to think that video is an objective record in order to win an argument? Could Harry provide a more balanced view by presenting an overview of the relevant anecdotes? What would such an overview consist of?

Inappropriate special effects?

John is preparing a video of his new software system for the CHI'95 conference. He carefully records what happens on the screen and then edits out a number of "boring" sections in which the system responds especially slowly. He adds a cut to a separate system, which will eventually be integrated with his, to show what would happen if they were connected.

Under what circumstances is it reasonable to make a system appear faster or more complete than it is? Would a disclaimer, describing the level of editing, be sufficient?

Inappropriate reuse?

Mary is the product manager in charge of a new product being exhibited for the first time at CHI'95. She is proud of their usability lab and shows videotapes of some of the user studies to illustrate how well the interface works. When asked if she had obtained permission from the subjects of the video, she is surprised and says it had not occurred to her to do so. She believes she is safe, legally, since the people in the tape were company employees.

Even if she is not legally liable, does Mary have a responsibility to ask permission from the subjects? When is it appropriate to ask permission? Prior to recording, after the subject has seen the video, or just before each event in which the video will be shown. Is it possible for the subject to really understand what the implications of giving permission are?

Recording without permission?

The XYZ research laboratory allows people in the lab to communicate with each other via live video connections. Privacy issues have been carefully considered and there are a variety of ways for people to select how others may connect to their cameras. A separate program takes snapshots every few minutes from the media space and displays them in a window. One day, one of the participants in the media space walks into a room where a group of her colleagues is laughing at something. She discovers it's a picture of her, with someone giving her a kiss on the cheek (actually, her husband). Since it is impossible to see who the person is, the group laughingly teases her about who it might be.

What is the difference between a temporary record, in which a recently-shot image is displayed, and a more permanent record? Is it acceptable to select segments from an on-going stream of activity and highlight them?

Computing on video

All the previous examples have actually occurred, based on today's technology. We face a potentially much bigger problem with the advent of digital video. At SIGGRAPH '93, a panel of special effects experts showed a "behind the scenes" look at Jurassic Park, in which a stunt woman's image is changed to become that of the main actress. We fully expect special effects in science fiction movies and are amazed by the skill at which dinosaurs can be made to look real. What is less obvious is that special effects are used in most Hollywood movies to create images of reality. These techniques can be used to distort what we see.

Employers already monitor workers through computers. Pillar (1993) surveyed over 300 CEOs and MIS directors and found that 22% searched electronic mail, voice mail, computer files and other networking communications of their employees. Lyon (1994) discusses the role of electronic surveillance in society. Video is increasingly part of that electronic surveillance. For example, Great Britain has a new system that automatically reads the number plates (license plates) of a speeding car and displays the number, together with the excess speed, on a roadside display. The aim at present is to shame the offender, but the next step may be to link the system to a police database. In the past, people had to watch video from electronic surveillance cameras. Now, computers can watch for us.

The above list is not exhaustive, but illustrates problems of varying levels of severity. In most of these examples, the individuals are well-intentioned. In fact, some members of the HCI community will find nothing wrong with some of these scenarios. But this makes the issue problematic: we need to raise the level of awareness and try to establish guidelines that we can agree upon.

GUIDELINES FROM OTHER PROFESSIONS

Since Human-Computer Interaction is a new field, we should learn from other, more established professions. Some research disciplines, particularly the medical and social sciences, have well-established guidelines for using human subjects and include the use of videotaped records in this context. Other disciplines, such as computer science, have no history of using video (or human subjects), leaving HCI members from those fields without any guidance. Unfortunately, even those disciplines that *do* have guidelines for video do not provide sufficient guidance for the diversity of uses of video found in the HCI community. This section briefly summarizes the ethical or legal perspectives of various professions.

Medicine

Physicians have a long history of dealing with ethical issues. The Hippocratic oath urges physicians to "do no harm", i.e. to protect the patient. Key issues include who should choose a patient's treatment plan and how can patients without medical training evaluate risks or give informed consent about procedures. Doctors must present the options and supply all "material" information to the patient, but not necessarily provide full disclosure. Macklin (1987, p.45) describes the evolution of biomedical codes from the *professional community standard*, which asks "what reasonable medical practitioners in similar situations would tell their patients" to the current *reasonable patient standard:* "what the reasonable patient would want to know before giving consent to a recommended therapy." Studies show that poor communication and lack of information make patients more likely to refuse a particular treatment. This standard has helped doctors develop better relationships with their patients, with the accompanying danger that better relationships make it easier to obtain consent. Shannon (1976) and Beauchamp & Childress (1983) provide different views on biomedical ethics. Collste (1992) explores the question of whether computers, particularly expert systems, cause new moral problems.

Social Sciences

Experimental Psychologists who perform experiments with people are expected to follow guidelines established by the American Psychological Association (1991) or the relevant organization in other countries. Individual universities and

organizations often publish guidelines, e.g., Queen's University (1989) or UCLA (1987). Most universities also have a committee that reviews research proposals and approves the procedures, e.g., the Massachusetts Institute of Technology Human Subjects Review Committee.

Subjects in Psychology experiments must sign a consent form that describes how any data collected about the subject will be used. After the experiment is completed, the experimenter is expected to "debrief" the subject and explain what occurred. Most guidelines are designed to protect the subject from harm. The APA guidelines were influenced by a famous set of experiments by Milgram (1965). Subjects were told to administer electric shocks to people (actually confederates of the experimenter) if they missed questions on a learning test. Milgram found that subjects followed these orders, even to the extent of believing they had killed the person receiving the shocks. Understandably, the subjects were traumatized by this experience.

Anthropologists and Sociologists work with people in field rather than laboratory settings. Videotape is increasingly used to record people's activities in the context of their daily lives. Both professions have also established ethical guidelines for the protection of their subjects. Critical issues include the problems of how to handle data collected in the field and how to handle naive informants who may not be able to give true informed consent.

Journalism

Hulteng (1985) describes the chief function of journalism as "the communication to the public of a reasonably accurate and complete picture of the world around us [...] The central ruling ethic of journalism [is] to report the news of the world dependably and honestly." (pp. 170-171) Broadcast journalists are thus ethically beholden to their audiences: they "protect" their viewers by presenting an "objective" account of an event. It is ethical to show a person negatively, as long as it is a "truthful" view. However, Hall (1978) explains that the FCC requires journalists to "contact the person attacked, provide a transcript of the charge and allow equal time for a response." Ordinary people (i.e., not celebrities) may not have their images broadcast without permission, unless the event is 'news' that occurred within the past 24 hours.

Hall discusses journalist's rights and responsibilities, from the Fairness Doctrine, which covers libel, slander and invasion of privacy to the Shield and Sunshine laws, which enable journalists to protect their sources. Kronewetter (1988), as well as Hulteng and Hall, discuss journalism ethics and Malcolm (1990) and Alley (1977) provide exposés of ethical violations.

Documentary film-makers do not believe in a single, objective point of view. Their goal is to present a fair perspective, from a particular point of view, through selective shooting and editing. Participants in their films should feel they have been presented fairly, if not always positively.

Marketing Firms

Marketing firms videotape "focus groups" to get customer reactions to new and existing products. Their loyalty is to producer of the products they examine. They must protect their clients, not only from potential lawsuits but also from information leaks to competitors.

Law and Accounting Firms

"Lawyer-client privilege" and "accountant-client privilege" (Causey, 1988) enable clients to speak in confidence to these professionals, another case of protecting the client, both legally and through ethical codes.

Publishers

Publishers must obtain copyright permission from the person who created the videotape before they can distribute it. They are legally responsible for protecting the producer (or copyright holder) of the videotape. Samuelson (1994) discusses legal precedents for the fair use of copyrighted material, including video, e.g., the ability of consumers to videotape broadcast television programs for home use.

Software Developers and Other Corporations

Corporations use video for a variety of purposes, from usability studies to product marketing. Getting permission protects the corporation from lawsuits. Hollywood's Universal Studios obtains global permission from their visitors: a sign informs them that, by entering the park, they have given tacit permission to be videotaped and their images may be used for commercial purposes. People who object are directed to a guest relations office.

Who are you trying to protect?

Trying to understand the goals of each of these professional guidelines reveals a fundamental problem: each is concerned with protecting someone, but they are all different types of people. Some try to protect the person being videotaped. Others try to create an objective view for the benefit of an audience. Some must protect the confidentiality of their clients, while others want to protect the producer of the videotape. The HCI community includes people concerned with each of these situations; our ethical guidelines must somehow address them all.

PRELIMINARY GUIDELINES

Who should the HCI community listen to when developing ethical guidelines for video? We have a diverse (and growing) set of uses of video, both as data about users and technology and as a presentation form for users, customers, management, fellow developers and the HCI research community. What perspective or perspectives should we consider? It is not enough to simply say we should "protect everyone"; we might end up avoiding video all together. We must consider the implications of a variety of uses of video and develop guidelines accordingly.

A good set of guidelines must cover everything from the initial videotaping to its final presentation and address, at least, the following questions: How do we obtain "informed consent"? How should recording of video be constrained? Are restrictions on the analyses performed necessary? Under

what conditions should video be presented and to which audiences? Who are we trying to protect? How can people protect themselves and what social structures are needed to ensure that they can? What are the legal and cultural implications of videotaping in different countries? How do we avoid confusing ethics and good taste?

The suggestions presented below are offered as a starting point for discussion, rather than a definitive set of guidelines. They are based on discussions with members of the HCI community and influenced by guidelines from other professions. I encourage people to try them and provide feedback about what does and does not work.

For the purposes of clarity, the term *producer* is used to refer to any person who creates a videotape, including academic researchers, usability specialists and software developers. The term *user* refers to any person in the videotape, including participants in laboratory studies or people being videotaped in the course of their daily activities.

A. Prior to Recording

1. Establish what constitutes informed consent

Prior to recording, obtain *informed consent*[1]: make sure the user understands the implications of being videotaped. The producer must define what constitutes informed consent. This may be difficult, as in the introductory example.

2. Inform people of the presence of live cameras

If a camera is left on, e.g., in a media space or to record an event, let people know when they are on camera and give them the opportunity to avoid being in the camera's view. A sign should state whether or not the video is being recorded. For example, EuroPARC's media space uses a camera in the commons area. A mannequin holds the camera and a sign to let visitors know they are on camera.

3. Ask for permission before videotaping

Tell users that a videotape record will be made and give them the opportunity to speak off the record or stop the recording altogether. Consider if the user feels social pressure to agree and make it clear that saying no is legitimate. Avoiding social consequences may be difficult, e.g., when a meeting is taped and only one person objects.

4. Explain the purpose of the video

Tell users the expected purpose and other potential uses of the video. For example, videotapes from usability studies are sometimes re-used for advertising. Tell users whether separate video clips or the entire session could be used.

5. Explain who will have access to the video

Tell users if anyone other than the producer will view the video. Users may not mind a researcher seeing a tape, but may feel uncomfortable if it is shown to colleagues, managers or general audiences, e.g. at a CHI conference.

6. Explain possible settings for showing the videotape

Tell users where the videotape could be shown. For example, at CHI conferences, videotapes may be shown to large audiences during talks, in small videotape viewing rooms, or on the hotel cable TV. In some corporate settings, some video clips may be used for advertising.

7. Explain possible consequences of showing the video

Producers may find it difficult to adequately convey how a user might feel if the video were shown in a certain setting. For example, a video clip shown on a television monitor to colleagues might be acceptable, but highly objectionable when projected on a 40 foot screen to a large audience.

8. Describe potential ways video might be disguised

If the video will be used in unpredictable settings, describe how the user's image will be disguised, e.g., through blurring the user's face. Mantei's (1990) "Strauss Mouse" video is a clever example of avoiding potentially embarrassing use of research videos; she used actors' hands to demonstrate the ways executives misunderstood a 'simple' computer mouse.

B. After Recording

1. Treat videotapes of users as confidential

Do not allow others to view videotapes casually and restrict access to them. This protects producers as well, e.g., if a manager decides to reuse video in ways that violate the original agreement between the user and producer.

2. Allow users to view videotapes

Ideally, give the user the opportunity to view the completed video. If this is not possible, the producer should consider ways in which people can be disguised. For example, some video editing systems can blur or distort a face.

3. If use of the videotape changes, obtain permission again

Asking permission is not a simple matter. Permission can be given before recording or after the user has been taped, or after the user has seen the tape, or just prior to an event in which it will be shown. The user can give blanket approval or approve individual events.

Give users sufficient information to make an informed choice and let them change their minds. For example, in the CHI'89 Kiosk (Soloman, 1990), users who contributed their images for the conference were again asked for their permission when the database was printed on a CD-ROM.

C. Editing Video

1. Avoid misrepresenting data

Producers are responsible for editing videos so as not to imply that particular events are representative if they are not. If video is presented as data, distinguish between anecdotal and representative clips of "typical" events.

[1]The principal of 'informed consent' is to ensure that people do not give their permission for something without understanding the consequences. Getting a signature on a piece of paper is not sufficient. The person requesting consent is responsible for explaining the procedures and ensuring that these procedures, as well as the subsequent use of any resulting information, are fully understood.

2. Distinguish between envisionments, working prototypes and finished products
Clearly label presentations of technology as envisionments, working prototypes or finished products. Envisionments propose or illustrate ideas that have not been fully implemented. Working prototypes have been implemented and should not resort to tricks to make them look more complete. Products are completed commercial systems and must avoid misrepresenting their performance or features. For example, Wellner's (1992) videotape includes clearly labelled envisionments of future ideas contrasted with examples of working software.

3. Label any changes made to enhance technology
Show the actual time it takes for a particular operation or else clearly label cuts designed to improve the pacing of a video presentation. Do not simply cut out the slow sections to make your system appear faster.

D. Presenting Video

1. Protect users' privacy
Hide individuals when possible. For example, shoot over the user's shoulder to see the screen, rather than the user's face. Obviously, this only works if specific characteristics of the user, such as facial expressions, are not an essential part of the record. Consider disguising the user's voice.

2. Do not highlight clips that make users look foolish
Do not show "funny" clips to make users look foolish. This does not mean avoiding all amusing video clips; just be sure that the joke is not at the user's expense.

3. Educate the audience
When giving a presentation, educate the audience: rather than laughing at the user, explain how misconceptions about the technology can lead to breakdowns.

4. Do not rely on the power of video to make a weak point
Be careful when showing video clips to support arguments in favor of particular technology changes. Some video clips may magnify small problems or present a distorted picture.

5. Summarize data fairly
Clearly state the purpose of summaries of video data. Video data can be compressed in a variety of ways. Video clips can provide a shortened version of what occurred in the session or can be used to "tell a story". If clips are presented in random order, they can be combined to show "typical" interactions, highlight unusual or important events, or present collections of interesting observations.

D. Distributing Video

1. Do not use videos for purposes for which they were not intended
Do not allow video of users to be used for purposes that they are not aware of, e.g. for an advertisement.

NEXT STEPS

ACM/SIGCHI has already begun to address a few of the issues relating to video. Every year, attendees ask to videotape CHI conference presentations, often for good reasons, such as non-native speakers who want a video backup. The SIGCHI executive committee is currently drafting a set of videotaping guidelines to try to balance the needs of audience members with the rights of presenters. The *vision.chi@xerox.com* mailing list has been the forum for the discussion of various drafts and the final version will be published in the SIGCHI Bulletin.

Another policy statement on video appears in the CHI Calls for Participation, e.g. from CHI'95: "Submission of video or pictures of identifiable people should be done with the understanding that responsibility for the collection of appropriate permissions rests with the submitter, not CHI'95." This gives submitters the unfortunate impression that this is solely a legal issue and that once permission has been obtained, the submitter and the conference have no further responsibility in the matter.

The CHI community, given its mix of disciplines and variety of activities, has a unique perspective to offer on the issue of ethics and video. We should take advantage of CHI-sponsored conferences to raise awareness and generate discussions, e.g. Mackay (1989, 1990). We can establish an electronic discussion forum and consider collaborations with other organizations, such as SIGCAS (Computers and Society), CPSR (Computer Professionals for Social Responsibility) and the Electronic Frontier Foundation.

In the late 1980's, SIGCHI sponsored a task force that produced the influential ACM SIGCHI Curricula for Human-Computer Interaction (Hewett et al., 1992). Perhaps the time has come for a similar task force to develop an HCI code of ethics that builds upon the general ACM code and addresses issues unique to HCI, such as video.

CONCLUSIONS

This paper illustrates how easy it is, however inadvertently, to misuse video. Because videotape has become so prevalent in our profession, it is time for us as a community to become aware of the potential dangers and develop guidelines for ethical handling of video. These guidelines must go beyond legal requirements and provide protection for a variety of people involved in the HCI community.

HCI is not the only professional field that uses video. We can learn from other professional ethical codes. However, we cannot blindly adopt other ethical codes. Each profession is concerned with protecting someone: the person in the video, the audience viewing the video, the client paying for the video or the producer of the video. Since the HCI community must address the needs of all of these people, we are uniquely positioned to create a broad-based set of guidelines that help us make informed, ethical decisions about our uses of video. If we are successful, guidelines may influence the wider set of organizations who are struggling with how to handle this powerful new medium.

ACKNOWLEDGEMENTS

The participants in the "Video as a Research and Design Tool" Workshop and attendees of the CHI'90 Discussion Forum on Video Ethics provided many insights and examples. Austin Henderson pointed out the importance of

educating audiences when presenting "funny" clips of users. Annette Adler, Sara Bly, and Marilyn Mantei contributed interesting discussions and comments on earlier drafts. I am especially grateful to Michel Beaudouin-Lafon for reading earlier versions of this paper and suggesting the title.

REFERENCES

ACM Code of Ethics and Professional Conduct, (1993) *Communications of the ACM*, vol. 36:2, pp. 100-105.

Alley, R.S. (1977) *Television: Ethics for Hire?* NY: Abington Press.

American Psychological society (1991) The importance of the citizen scientist in national science policy, *APS Observer,* vol. 4, pp. 10-23.

Anderson, R.E., Johnson, D. G., Gotterbarn, D. and Perrolle, J. (1993) Using the new ACM Code of Ethics in decision making. *Communications of the ACM*, vol. 36:2, pp. 98-105.

Bagley, F.J. (1977) Ethics, unethical engineers, and ASME. *Mechanical Engineering.* vol. 99, pp. 42-45.

Beauchamp, T.L. and Childress, J.F. (1983) *Principles of Biomedical Ethics*, NY: Oxford University Press.

Bok, D. (1982) *Beyond the Ivory Tower: Social Responsibility of the Modern University.* Cambridge: Harvard University Press.

Clark, H.H. and Schaefer, E.F. (1989) Contributing to Discourse. *Cognitive Science*, vol. 13, pp. 259-294.

Causey, P.Y. (1988) Duties and Liabilities of Public Accountants. NY: Dow-Jones Irwin.

Collste, G. (1992) Expert Systems in Medicine and Moral Responsibility. *Journal of Systems Software.* Vol. 17, pp. 15-22.

DPMA (1989) DPMA Position Statement Handbook. 505 Busse Highway, Park Ridge, IL 60068.

Dunfee (1986) *Integrating ethics into the MBA core curriculum.* The Wharton School of business. Reseach funded by EXXON Educational Foundation.

Dunlop, C. and Kling, R. (Eds.) (1991). *Computerization and Controversy.* NY: Academic Press.

Forester, T. and Morrison, P. (1990) *Computer Ethics: Cautionary Tales and Ethical Dilemmas in Computing.* Cambridge: MIT Press.

Frankel, M.S. (1989) Professional Codes: Why, how and with what impact? *Journal of Business Ethics*, Vol. 8:2-3, pp.109-116.

Gotterbarn, D. (December 1993) Case Studies: The Captain Knows Best. *Computers and Society.* Vol. 23:3.

Hall, M.W. (1978) *Broadcast Journalism: an Introduction to News Writing.* NY: Comunication Arts Books, Hastings House.

Hewett, T. (1992) *ACM SIGCHI Curricula for Human Computer Interaction*, ACM, New York: NY.

Hulteng, J.L. (1985) *The Messenger's Motives: Ethical Problems of the News Media.* Englewood- Cliffs, NJ: Prentice-Hall .

ICCP (1989) ICCP Code of Ethics. *Your Guide to Certification as a Computer Professional.* ICCP, 2200 E. Devon Ave., Suite 268, Des Plaines, IL 60018.

IEEE (1979) *IEEE Code of Ethics.* IEEE, 345, East 47th St., NY, NY 10017.

Johnson, D.G. (1994) *Computer Ethics,* Second Edition. Englewood Cliffs,NJ: Prentice Hall.

Kronewetter, (1988) *Journalism Ethics.* NY: F. Watts.

Ladd, J. (1980) The quest for a code of professional ethics: intellectual and moral confusion. in R. Chalk, M. Frankel, & S. Chafer, Eds., *AAAS Professional Ethics Project,* American Association for the Advancement of Science, Washington, D.C., pp. 154-159.

Luegenbiehl, H.C. (1992) Computer professionals: Moral autonomy and a code of ethics. *Journal of Systems Software.* Vol. 17, pp. 61-68.

Lyon, D. (1994) *The Electronic Eye: The Rise of Surveillance Society.* University of Minnesota Press.

Mackay, W. (1989) Video as a Research and Design Tool. *Special issue of the SIGCHI Bulletin*, Vol. 21:2.

Mackay W. (1990) Video Ethics discussion forum, in *Proceedings of CHI'90 Human Factors in Computing Systems* (Seattle, WA), ACM Press, pp. 381-386.

Macklin, R. (1987) *Mortal Choices: Bioethics in Today's World.* NY: Pantheon Press.

Mantei, M. (1990) The Strauss Mouse. *SIGGRAPH Video Review.*

Martin, D.C. and Martin, D.H. (June 1994) Ethics Code Review.*Computers and Society.* ACM Press pp.21-25.

Milgram, S. (1965) Some conditions of obedience and disobedience, *Human Relations*, vol. 18, pp. 57-76.

Pillar, C. (July 1993) Bosses with X-Ray eyes: Your Employer may be using computers to keep tabs on you. *Macworld.* pp. 118-123.

Queen's University Department of Psychology (1989) *Ethics Clearance for Research on Human Subjects*, Queen's University, Kingston, Ontario, Canada.

UCLA Faculty Handbook, Supplement A: Policies and Procedures, (1987) University of California at Los Angeles Publications Office, Los Angeles, CA.

Salomon, G. (1990) Designing Casual-Use Hypertext: The CHI'89 InfoBooth. *Proceedings of CHI'90 Human Factors in Computing Systems* (Seattle, WA) ACM Press. pp. 451-458.

Samuelson, P. (January 1994) Copyright's Fair Use Doctrine and Digital Data. *Communications of the ACM*, vol. 37:1, pp. 21-27.

Shannon, T.A. (1976) *Bioethics.* NJ: Paulist Press.

Wellner, P. (1992) The Digital Desk. *SIGGRAPH Video Review.*