SIGGRAPH 2001 Course 41

HOW TO GIVE A GREAT SIGGRAPH TALK

Three experienced speakers will share their talents for creating and delivering great SIGGRAPH talks. They will show how to craft a compelling presentation that informs and entertains the audience. A professional body worker will address the body in performance and the panic of public speaking. The course will cover how to use media, technology, and the human body to create memorable presentations appropriate for SIGGRAPH and other venues.

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SIGGRAPH 2001 Course 41

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How to Give A Great SIGGRAPH Talk

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Duration, level Half-day, all levels

Summary statement Three experienced speakers will share their talents for creating and delivering great SIGGRAPH talks. They will show how to craft a compelling presentation that informs and entertains the audience. A professional body worker will address the body in performance and the panic of public speaking. The course will cover how to use media, technology, and the human body to create memorable presentations appropriate for SIGGRAPH and other venues.

Prerequisites None

Presenters Charles Poynton — Barbara Morris

Jim Blinn, Microsoft — Andrew Glassner

Expanded statement There's an urban legend that a pollster found that people fear public speaking more than death. Whether the statistics back this up, many people find giving a talk challenging, and this is true nowhere more so than at SIGGRAPH, where the audience's expectations are dauntingly high. There are specific, real ways to make public speaking less terrifying, and for creating talks that will satisfy even a SIGGRAPH audience. We will show how to prepare and deliver a great talk appropriate for Papers, Panels, Courses, Sketches, or even the real world beyond SIGGRAPH.

Topics covered

Identifying your subject
Assessing the knowledge level of the audience; context; limiting
Organizing your thoughts
Preparing a proposal
Creating great slides and notes
Getting permissions
Text and imagery
File formats, fonts, graphics, and other production issues
Mental preparation for the talk
Physical aspects of performance; how to stand, move, breathe
How to begin and end
Using video; using two projectors effectively
Giving demonstrations
What to do if you panic
How to respond to questions
Time management
Handling equipment malfunctions

Course syllabus

Each of the speakers will cover the entire gamut of preparing and delivering SIGGRAPH talks from their own point of view. The speakers will collaborate beforehand to avoid duplication, but each will run through their personal process from start to finish. We believe that these contrasting – but successful – ways of presenting will provide attendees with a variety of choices for creating a style that works best for them.

Public speaking can be terrifying. Fear often results in people disconnecting their minds from their bodies, in an unconscious attempt to avoid the panic the body feels. But your mind can't deliver the goods alone! A professional body worker will discuss and demonstrate a technique to calm the mind and promote the unrestricted movement of energy throughout the body. She will also give tips on how to stand, move, breathe, and stay relaxed.

Course history

This is a new course. We are unaware of previous courses that have covered this material. We believe that there is interest in this course, and value in it, because public speaking continues to be an important part of SIGGRAPH, and every year people must face this problem for the first time. Even experienced presenters sometimes find public speaking difficult, and some of the ideas presented here could help them smooth the process.

Continuity statement

The speakers will follow each other, covering the same ideas in their own ways. There will be lots of forward- and backward-looking references to the other speakers and their opinions.

ORGANIZER/PRESENTERS

Charles Poynton works to integrate video technology – particularly high definition television and accurate color reproduction – into computer workstations. While at Sun Microsystems he initiated Sun's HDTV research project, and introduced color management technology to Sun. He is a Fellow of the Society of Motion Picture and Television Engineers (SMPTE), and an Honorary Member of the BKSTS. He has presented many popular courses and seminars, including *Digital Color* at SIGGRAPHs since 1994. His book, *A Technical Introduction to Digital Video*, was published in 1996 by John Wiley & Sons.

Jim Blinn is a Graphics Fellow at Microsoft Research. He is a legend in the graphics community for fundamental research work and applied animations. His work has ranged from basic modeling and animation algorithms to videos of spacecraft voyages and the teaching of mathematics and physics. Jim was the keynote speaker at SIGGRAPH 98, and received the Stephen A. Coons award in 1999. His talks are noted for their clarity, excellent visuals, and engaging presentation.

Andrew Glassner is a novelist and screenwriter. Prior to full-time writing, he most recently worked as a researcher at Microsoft Research and Xerox PARC. He created the *Graphics Gems* series of books, wrote *Principles of Digital Image Synthesis*, served as the Editor-in-Chief of ACM *TOG*, is the Founding Editor of the *Journal of Graphics Tools*, and writes a regular column for IEEE *Computer Graphics & Applications*. He has spoken at SIGGRAPH many times.

Barbara Morris has been a health care practitioner, professional body worker, and registered massage therapist for the last 11 years. She specializes in emotional release work, educating her clients to facilitate the conscious integration of their minds and bodies. For seven years, she counselled emotionally disturbed adolescents in a range of restrictive settings. Prior to that, Barbara was a creator, writer, researcher, and interviewer for a ground-breaking television series entitled *Fast Forward*. This timely series explored the potentials and pitfalls of the exploding microelectronic revolution – 20 years ago.

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Speech anxiety

You're prepared to give a talk. You're on time, well organized, and possess complete confidence in your knowledge of the material you're about to deliver. You get up on the stage, and you freeze like a deer in the headlights. Or, even worse, you're worried about freezing, well before you even get up there, and a panic response has taken over your entire body.

For many people, public speaking can be a terrifying experience. The anxiety response symptoms are well documented – dry mouth, sweaty palms, shaking hands, pale (drained) skin, blanking mind, numbing body, shallow breathing, pounding heart, dizziness, quivering voice, weak knees, and butterflies in the stomach, to name a few. The fear and anxiety we feel is an accumulation of the thoughts we have, the emotions they elicit, and the resulting somatic or body responses that are generated.

A brief look at the brain and the nervous system will reveal where our fear response originates, where our rational brains have gone, and how to get these two elements – our minds and our bodies – back, balanced and working together.

Brains

Our brain comprises two hemispheres, connected by the corpus callosum and the brain stem housing our primitive brain. The left hemisphere (LH) and the right hemisphere (RH) both contain sensory, motor and association areas, but for certain functions the two hemispheres are asymmetrical. The LH is dominant for language/speech, hand and motor control, linear thinking, and logical, organizational and analytical functions. The RH is dominant in music, visual-spatial perception, holistic tasks, and emotional, experiential, and representational functions. Our RH has more functional connection to our primitive brain. Basically, the left brain does the thinking, and the right brain does the feeling.

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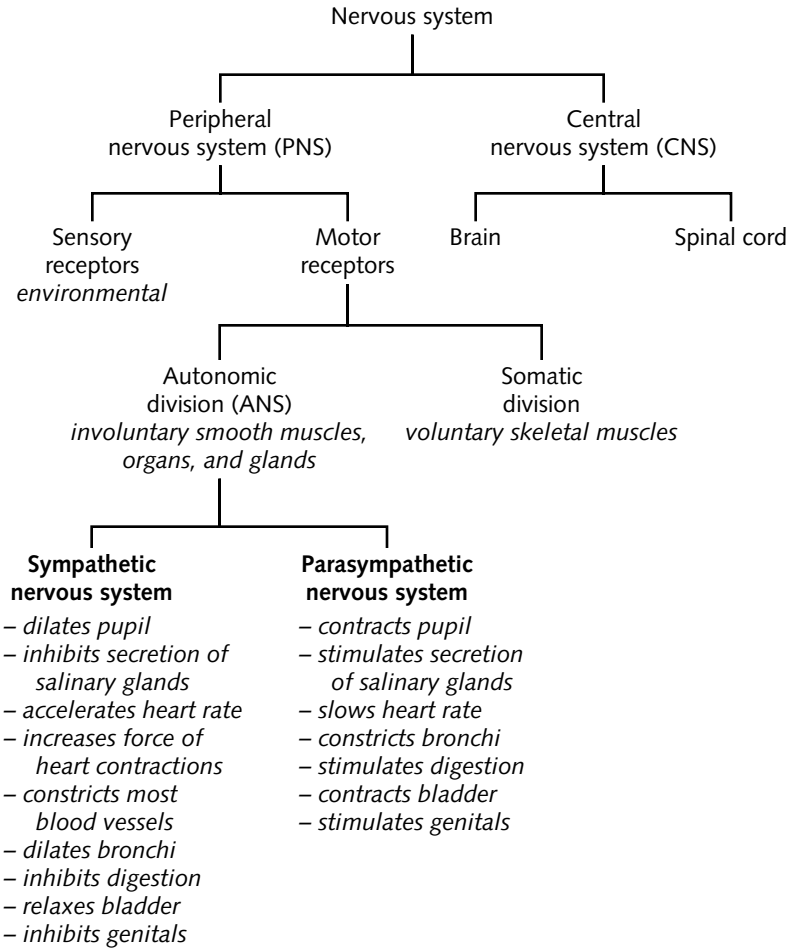


Nervous systems

Our nervous systems can be divided into two parts: the central nervous system (CNS) and the peripheral nervous system (PNS). The CNS consists of the brain and the spinal cord. The PNS has sensory receptors that detect body changes, internally or externally, and report those to the CNS. The PNS also has motor receptors and controls the voluntary muscles with its somatic part (somatic division), and the involuntary muscles, glands, other organs, blood vessels, and lymph vessels with its autonomic division.

This autonomic division, controlled by the primitive brain, is the one we're the most interested in when we're examining a fear and anxiety response. Called the autonomic nervous system (ANS), it can be divided into the *sympathetic* and the *parasympathetic* nervous systems.

When the parasympathetic nervous system is active we are relaxed, at rest; our heart rate is calm and steady, and our breathing is slow and deep. On the other hand, when the sympathetic nervous system is active our body prepares for an emergency, and the "fight or flight" response is in effect, our heart beat is fast and strong, and our breathing is shallow and rapid. Many of the anxiety response symptoms can be present at once.

Blood flow patterns, which are an indication of neural activity, are dynamic. They change depending on our physiological and psychological conditions. In a sympathetic, anxious state, our blood flow and neural activity are increased to the large skeletal muscles and the heart.

Consequently, in sympathetic overdrive, when we're experiencing panic and fear of public speaking, very little blood is going to the brain – and thinking clearly becomes extremely difficult.

Help

A few speakers interpret their increased heart rate and queasy stomach as positive signs of being "charged up" and "emotionally ready" for their speech. Their sympathetic nervous systems energize them and their unpleasant physical symptoms remain fairly subdued. Lucky dogs! For most of us an over-sympathetic response is our plight. Our panic is pervasive. However, a strong symbiotic relationship between our primitive brain and our experiential, feeling, right brain suggests that we may have a built in tool that can help us diminish the panic.

I would like to explain and demonstrate a technique that incorporates this relationship. You might choose to try it if you suffer from speech anxiety. In the late 1980s, psychologist Roger Callahan combined elements of quantum theory, kinesiology and acupressure, (the "offspring" of acupuncture) in order to treat people with phobias and traumatic stress disorders. He called his technique Thought Field Therapy (TFT). More recently, Gary Craig, an engineer, refined the technique and renamed it the Emotional Freedom Technique (EFT). KristI Magraw, a body-oriented psychotherapist has further refined the technique. It is my interpretation of Kristi's teaching and understanding of the technique that I will be presenting and we prefer to call it the Paradox Tapping Technique, (PTT).

How PTT works

Our thoughts create patterns of electrical energy that cause neurotransmitters, hormones, and chemicals to be released in the body; our bodies respond. We experience this physical translation of our thoughts to our bodies as emotions. When the anxiety response is activated the flow of neurological information and the flow of blood throughout the body are disrupted. Specific points on our bodies correspond to points on the acupuncture energy-flow meridians.

By literally tapping these points we can stimulate blocked neural receptors under the skin. The tap will generate an electrical, biochemical impulse and be transmitted to the brain. Here, the impulse is interpreted and reconfigured to stimulate the initiation of several parasympathetic responses. The tapping provides a kick start to the frozen parasympathetic nervous system.

Increased cooperation and balance between the left and right hemispheres is accomplished through several aspects of the tapping technique. One of the most powerful is the use of a spoken paradox.

The first step is to think of an emotion you are feeling that you would like to feel less of, in this case, the fear of public speaking . You may be afraid you'll freeze, forget your material, or not be able to answer questions. Whatever the fear is, your job will be to focus on it. Rate it on a scale from 0 to 10 with the goal in mind to lower this rating. Then, devise a phrase that states that, "even though I'm afraid ... (I'll blow it), I love and accept myself deeply and completely." What you're doing here is using the paradox of the fear and the acceptance to create an obvious focal point of cognitive dissonance. The body is not happy with cognitive dissonance. The negative fear feeling and the love and acceptance that you will express in spoken words are experienced with discomfort when in close proximity. The paradox will shift in favour of the self love and acceptance, which is bigger and more consistent than the transient, situational fear you are experiencing at that moment. The paradox gets further broken down by the tapping technique as it opens up the energy pathways along the acupuncture energy meridians. The blocked energy – frozen or detoured to produce and maintain the fear symptoms – will begin to flow more naturally as you progress through the technique. You'll use the phrase you've devised and a reminder word like "fear" to focus on and push the paradox towards a resolution while rubbing a particular area on the chest just below the collarbone. This will stimulate the lymphatic system to increase its circulation and begin opening the neural pathways.

Another means of balancing the left and right brain functions within the PTT is an exercise of eye movements. The eyes are moved from side to side and then rolled around in big circles, clockwise and counter clockwise. In a highly sympathetic state the rolling movements may seem jerky and disjointed. It's as though the corpus callosum keeps skipping a beat. It may be useful to continue this sequence until there's at least a hint that a smoother motion is evolving. With the restoration of smooth eye movements comes a smoother transfer of information between the hemispheres of our brains.

Following the eye movement exercise, a quick sequence of humming with the right brain and counting with the left uses contrast pressure to continue the break-up of the LH/RH "brain lock".

I believe this technique works because it effectively connects our body, shouting about our fear, with our mind, knowing the more permanent truth about our competence.

The Paradox Tapping Technique

- Establishing the Paradox

Devise the pertinent phrase and the reminder word ("Even though I'm afraid ... I love and accept myself deeply and completely," and "fear"). Rate the emotion.

- Preparing the Body

Hold one hand in a fist with the thumb on top. To stimulate an acupuncture point on the other hand, karate chop the thumb knuckle of the fist hand with the fleshy outside edge of the other hand, below the baby finger. Try to keep the karate chopping hand relaxed. Do this seven times on each hand.

With the fingers of your right hand placed under the left collarbone, rub circles towards the centre of the chest while saying "the phrase" three times aloud ("Even though I have this fear...I love and accept myself deeply and completely").

- Tapping Sequence

Tap each location firmly with the middle finger of both hands (supported by the index finger). Tap each seven times while occasionally repeating the reminder word.

1. Inner corner of both eyebrows

2. Outer crease of the eyes

3. Bottom, midpoint of the eyes

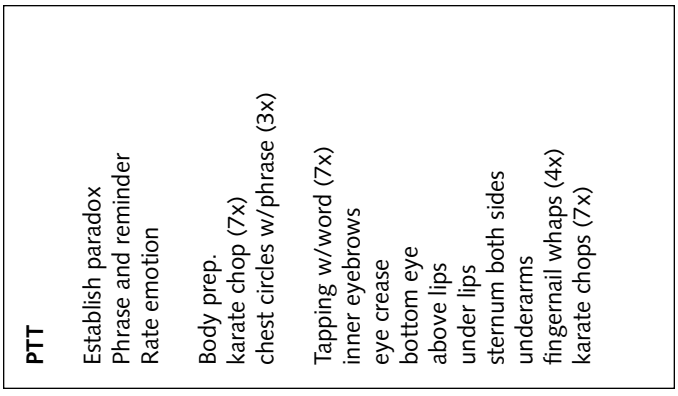
4. Above upper lip

5. Below lower lip

6. Both sides of the sternum (front of chest) one inch from the midpoint

7. A hands width below the underarm

8. Inside bottom corner of each fingernail on both hands (whap with the opposite index finger, four times for each finger)



9. Fleshy part of hand (repeat karate chops)

- Brain Tune-up/Eye sequence

Use the right middle and index fingers to tap with steady rhythm a point on the back of the left hand, between the baby finger and the ring finger, at the midpoint between the base of the fingers and the wrist. Keep your head steady and move only your eyes.

1. Close eyes then open (five taps for each).

2. Look down to the right (with head steady for five taps).

3. Look down to the left (with head steady for five taps).

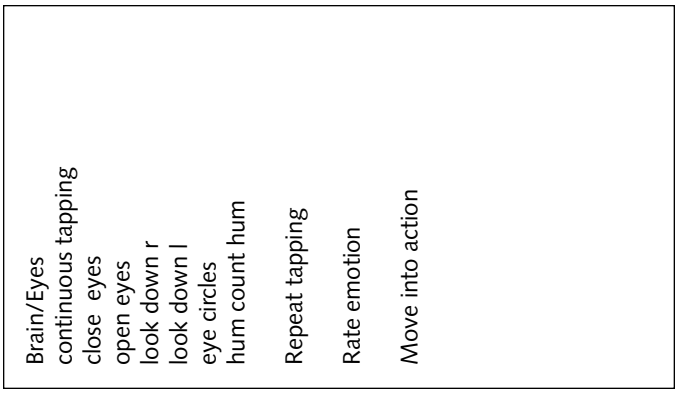
4. Circle eyes, full, smooth circles one way about five times, and then the reverse.

5. Hum a tune out loud, count to five out loud, and hum a tune out loud (with five taps for each move).

- Repeat the karate chops and the tapping sequence
- Check feeling on a 0–10 scale
- Then move into action

Tips

The objective is not to get rid of the emotions, (fear) but to facilitate a shift and a balancing of body and mind. The number of points in this technique may seem intimidating. If you take it in small pieces, knowing that any amount of it can break up a brain pattern, learning it will be easier. The counting does not have to be exact, in fact, it's better if it's not. In circumstances when you're really in a hurry, you could just work the paradox and get some benefit. There's no right way to do it, just what feels good.



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Change your mind

There are several ways to manage speech anxiety. The most promising cognitive approach I've found is described by Michael T. Motley at the University of California, Davis, in his handbook, *Overcoming Your Fear of Public Speaking*. According to Motley, the most helpful concept in reducing this type of fear is to focus on your talk as a communication task rather than as a performance.

I've interviewed several excellent speakers and all of them described their delivery on stage as a performance. However, that may not be a useful perspective to hold in mind if you find yourself overwhelmed by speech anxiety. Motley has found that most speakers that experience stage fright view speeches as performances. Conversely, low-anxiety speakers view public speaking as a communication encounter.

The role of speakers is to share ideas, relate their points of view, and make it easy for the audience to understand their information. Of course, there are many performance techniques that may enhance the delivery of that information, but those techniques are merely useful tools rather than the substance of a talk. If you approach public speaking from a *performance orientation* there are many aspects of true performance that tweak the anxiety knob higher; those aspects don't even come into play if you can hold a *communication orientation*.

True performance brings to mind plays, musical recitals, and dance routines. These normally involve the memorization and delivery of a large chunk of material without any breaks, goals oriented towards receiving a positive evaluation of your performance skills, and not being natural – playing a role and even wearing an uncomfortable costume you wouldn't normally be caught dead in. Performances generally suggest abnormal, unnatural situations. There can be considerable fear of tripping over yourself, forgetting your lines, and looking foolish.

Seen as a communication task, a talk can be more closely associated with daily, relaxed, natural conversation than with a performance. I never memorize my lines in preparation for a conversation – unless it's

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with my ex-husband! If a talk is memorized it will sound stiff and unnatural. In a conversation there are pauses where you can collect your thoughts. In a talk, even though you don't have a conversation partner providing pauses, you can build in pauses by dividing your material into nice bite-sized sections. By anticipating a pause, you can more easily make it to the end of each short section. Pause, breathe, move, take a break, and carry on.

Motley says there are only two primary differences between giving a talk and having a conversation. First, you get to talk longer before your "turn" is up, and, second, you get to take more time planning, organizing, and clarifying your thoughts before you speak. When giving a talk, as in a conversation, you can be relaxed, natural, and comfortably attired. Even though you can enjoy the comfortable feeling of having a conversation while you're using the *communication orientation*, you don't have to apply any brain cells to deciphering anyone else's point of view – at least until your designated question period that is!

If you're comfortable performing – great! Perform. If you're not comfortable then remember, it's the content your audience wants, not a performance.

There is one caution to having a *communication orientation* rather than a *performance orientation.* If you're a boring, unanimated, monotone conversationalist, don't expect your talk, no matter how natural, to keep anyone awake. But there's no reason you need to be boring. If you have passion for your ideas – let it show! Just communicate your thoughts with the same excitement that fueled your enthusiasm for giving the paper in the first place.

There are proven performance techniques that you can use to enhance your material and to make your delivery interesting and alive. This will be a lot easier if your anxiety isn't overwhelming you. Changing your mind from a *performance orientation* to a *communication orientation* could help.

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Public Speaking Panic Control Tips

The following suggestions are geared towards speakers who suffer from speech anxiety. Some tips may be useful and others may not. Play with them, and get comfortable with what works best for you.

Before

• In advance

Visit the room

If there's a stage, stand on it, speak, scream (as long as no one is giving a talk) cry, faint. Get it out of your system.

Check the temperature so you can plan your comfort level.

Get oriented

Determine the availability of stools, rostrum, projectors, drinking water.

If you'll be using a rostrum, make it your friend.

Check it's height and compare with your height.

If appropriate, plan to use it to rest props on, lean on, use as a foot-stool (put one foot up while standing to ease your back muscles).

Take notes.

• Choreography

Divide the talk into sections and breaks.

Determine several comfortable positions: standing, standing with your foot up on a ledge or stool, sitting, walking. Designate positions to suit the material.

Build movement into the material and use it to help divide the talk into accomplishable increments. Create breaks with physical signposts (e.g., walk, shift, sit, stand) to be used in the transitions in the material.

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Find a good neutral stance, knees slightly bent, not too stiff

and not too relaxed. Find it, experience it, remember it.

Play with your hands and your arms to determine where you're most comfortable having them (e.g., hands in pockets, gesturing, holding props).

Choreograph a comfortable physical presentation.

Make notes.

- Night before

Rituals. Find a comfort prop: a squeeze ball, teddy bear, your favorite mouse.

Don't think about the talk (at least for awhile). Do something else – anything else.

Eat well – but not too well!

Do yoga, exercise, a balancing stress reducing technique (e.g., the Paradox Tapping Technique).

- Day of

Breathe

Exercise; jogging, yoga, stretches with deep breathing. If you can do some physical activity before the talk to increase oxygen intake and release endorphins (anti-pain neurotransmitters), it would be a good warm-up.

Dress comfortably with pockets (for hands and props).

Wear cozy, supportive shoes.

Read notes and take them with you. Don't forget your props.

Arrive early – but not too early!

Focus on *communication* rather than *performance.*

Find a quiet room and do the Paradox Tapping Technique about 15 minutes in advance if you can predict you'll have that time available. If not, try to do it as close to your talk as possible.

During

- Settle in

Breathe. When all else fails – keep breathing!

Find your neutral stance.

Have fun.

Remember, you just have to make it to the next section. There are breaks built in. Use them to pause, get your bearings, adjust your breathing, re-establish your neutral stance, (remembering to bend your knees). Think of breaks as mental stretches.

- Movement

You've arranged stools, chairs, the rostrum where you want them to be. Use them: lean, sit, put your feet up.

Try to follow your choreography plan. Movement is important for clear thinking. It provides the breaks from the thinking – space and time for your thoughts to rejuvenate.

Movement builds confidence from the knowledge that you are presenting a more visually interesting scene than does a static figure. Knowing this can be calming.

- Eye contact

...with the right people! Engage with someone in awe, someone who seems excited about what you're saying. This can bolster your confidence and relax you.

Communicating directly with someone helps you feel more connected, more like you're having a conversation.

After glow

Congratulations

It's over. Keep breathing.

You probably did much better than you think you did.

If you're still afraid, seek professional help!

Things I Hope Not to See or Hear at SIGGRAPH

Jim Blinn
First published 1988

No, I'm not going to talk about flying logos or glass balls. I am going to talk about that special form of performance art known as "Giving a Technical Presentation." These ideas apply to speakers in panels and tutorials as well. I realize that there is a somewhat small direct audience for this, but others of you might be able to use this information in your own talks elsewhere. Also, you should expect this from presentations you hear at SIGGRAPH.

SIGGRAPH sends out a lot of stuff about how to prepare visuals, etc., although, from what I see, not many people read it. Reading this chapter does not excuse you from reading SIGGRAPH's materials though. The following ideas are just my own personal biases. I will phrase them as things *not* to say/do because, let's face it, it's a lot easier to complain.

Talks Read Verbatim

A technical talk is just one facet of a multimedia event built on your work. An adventure story appears different in the film version and the book version. Likewise, different things are appropriate for the spoken version of your paper than for the printed version. A much more conversational style is best for the talk. Tell a story about what got you interested in the problem in the first place. Briefly relate some dead ends that you tried that didn't work. But please don't read your paper verbatim. We are people out here in the audience; we're all your friends, just talk to us. The only exception to this rule is if you are not a native English speaker. If you are not fluent in English, it is probably best to have your words already prepared.

Illegible Slides

The most important part of your talk is the visuals; this is SIGGRAPH after all. I am sometimes amazed at how many illegible slides are shown, most especially by representatives of organizations (who shall remain nameless) that sermonize about high-quality imaging. Here are some things that have disturbed me most about slides I have seen.

Microtext

Many of you are involved in the microcircuit revolution and tend to think this also applies to the text on your slides. It doesn't. My personal rule is to put no more than six lines of text on any one slide. And while

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you're at it, use the biggest font you can that will fit on the slide. Six lines of teeny-weeny text with gigantic borders is still not readable. But, you may ask, what if I have more than six lines? Well...just use more than one slide. See? Simple.

A good check for readability of slides is to hold them at arm's length and see if they are still readable. (That is what I do, and my arms are probably longer than yours.) Believe me, that is how small they look from the back of the room. In fact, I make all my slides on my animation system that only has video resolution. This may seem to be a disadvantage, but it's not. It forces me keep the slides simple enough to be legible from a long distance.

One effect of this restriction concerns equations. You simply can't have a complex equation on a slide. Even if you shrink its many terms down so they will fit, it will look like grey noise from the back of the room. Recast your equations into simpler chunks and give each chunk its own name. Make one master slide with the basic equation in terms of these names. Then make a separate slide to define each chunk. Don't put more than one equation on a slide unless it is fantastically necessary. Use separate slides for each equation; it focuses attention while you are talking and gives you more room for each one.

Magenta Lines on a Cyan Background

Another design issue concerns colors and contrast. Your best bet is to use some dark background (like blue) with very light color text (like white or yellow) on it. Alternatively you could use a light background and dark lines. Even then, I have seen some terrible slides that use black letters on a white background. Even though the letters were big, the slides were illegible because the lines were too thin. Light areas seem to expand visually, so dark lines tend to get eaten up by a white background. If you must use light backgrounds, use a much thicker line width for the dark lines to compensate for this phenomenon.

If you want to emphasize some items on the slide, make them in a *lighter* color than the rest (not just in a *different* color).

The Entire Text of the Talk Echoed on Slides

The audience is not going to want to read a lot of text while simultaneously trying to pay attention to what you are saying. Text on slides should just consist of section headings. If you have a section of your talk that you don't have any obvious graphics for, don't feel compelled to put the text you are reading on a slide just to have something there. The days of silent movies are over. If you must have something, try showing a picture of a pretty waterfall.

And remember, folks, no overhead transparencies allowed. There is a reason for this: they look terrible no matter what you do.

"I'm Sorry These Slides Are So Dark."

I don't think I have ever seen a slide at SIGGRAPH that is overexposed. When you film your efforts, make several exposures and pick the brightest one. In general, err on the side of overexposure; make the exposures longer than you think will be necessary.

But for heaven's sake if, despite my sage advice, your slides don't come out bright enough, don't make a big production out of apologizing for them. It doesn't make them any more readable, and it may just call attention to problems that may not be as noticeable as you thought. Your view of the slides from where you speak is not the best one. The slides will look a lot brighter to the audience than they do to you. Just show them and get on with the talk.

Likewise, don't spend a lot of time fiddling with the focus (which requires shouting at the AV people in the back of the room). In the first place, your slides should be big and bold enough that a little bit of out-of-focus shouldn't bother them. Remember, from the back of the room the screen looks like a postage stamp. Problems with focus that appear bad to you, with your nose three feet from the screen, won't show up to the audience.

Talking about, and taking time with, these issues distracts from your presentation.

The Floating Head

Because of the size of the auditorium, your face will probably be televised on a large TV screen behind you. The AV people set up the lighting to make your face optimally visible. This often has the effect that dark-colored clothing completely disappears into the background. This gives the impression of just your face floating in a sea of black. So...wear light-colored clothing. Your shoulders and arms will then show up and your audience will be able to tell that you are a whole person.

Additionally it would probably help to remove your plastic name badge holder while you are speaking. The television lights often reflect off its shiny surface disturbingly.

The Dancing Pointer

Using a laser pointer in a large auditorium doesn't work very well. The screen is so far away that the slightest wiggle in your hands makes the laser spot jump all over the screen. Also when you are not pointing at anything you tend to forget about the pointer and wave your arms around and the pointer spot goes all over the place. Instead check out the pointer built into the presentation program (usually PowerPoint). This moves the cursor around the screen under control of the mouse and you can use the cursor as the pointer.

The Tops of Speakers' Heads

No, I'm not saying this because I'm tall. I mean that speakers should look straight out at the audience instead of burying their noses in their notes. I know it looks like a black hole out there, what with the dim house lights and the spotlight on you. You can't really see the audience, but there *are* people there. If you look down all the time, all that people will see is the top of your head. This is so important that I'll say it again. Look up at the audience; it looks a lot better for the TV cameras.

Also, don't turn around to admire your face on the big TV screen. It just won't work; all people will see is the back of your head. Likewise, don't turn around and look at your slides all the time (except maybe for a brief glance to make sure you are on the one you expect). Traditionally, people really are more used to seeing the front of peoples heads than any other side.

The Fading Voice

Another reason not to turn around a lot is sound. There is a microphone in front of you, not behind you. A lot of speakers start out saying something to the microphone like "And as you see in this slide..." Then they turn around and look at the slide and say "...the secret of the universe is revealed." Only they aren't speaking into the microphone anymore. What comes out is "mumble mumble mumble." Speak consistently into the microphone. Let the your secrets be revealed.

Wiggly Pointerism

You will probably have a laser pointer to use during your talk. Since the screens are so large and so far away from you, a very slight motion of your hand will make the pointer jump around in a very distracting fashion. Try to keep your pointing hand as steady as possible to keep the audience from getting seasick. Or else turn it off when you aren't actually pointing at something.

"I'm Almost Out of Time so I'll Just Run Through the Rest of these Slides Real Fast."

You are hereby warned: you only have about 15 minutes to do your brain dump (for a talk in the technical session). The time you have is well known to you in advance; you must use it wisely. About all you can expect to do in this amount of time is give an overview of your paper and inspire those in the audience to read the paper itself for details.

Plan on spending most of your time talking about your new ideas. I have seen talks where the speaker spends 13 minutes giving a review of the field and a justification for why their specific problem is interesting. Then—what do you know—there's no time left for the meat of the talk. I think you can safely assume that most everyone in the audience thinks computer graphics is a good idea and that, in fact, the specific problem you are addressing is worth solving. You can probably

do fine with about two minutes of introduction before getting to the good stuff.

Don't go into enormous detail in derivations of the math, just give the basic assumptions and the results. This simplification process goes hand-in-hand with the simplification of your equation slides. The general gist of the math should be describable without going into a lot of fine details that people will best get out of the paper.

If you have a videotape, time it and make sure it doesn't eat up the whole time for the talk. Speaking from experience, it is very embarrassing for a session chairman (whose main duty is as time police) to have to interrupt a nifty tape because there's no time left.

"Uh, I Guess That's All I Have to Say."

Probably the most important parts of your talk are the first and last sentences. Have these all figured out before you go up to the podium. Try to have something snappy to end with rather than just drizzling off. You also must give the audience a signal for when to applaud. Usually a simple "Thank you" will suffice.

Remember

Look up. Bright slides, big letters.

Uh, I guess that's all I have to say.

Thank you.