



Snooze Alarm!

Avoiding PowerPoint® Perils

The cliché "Death by PowerPoint" used to be funny. Today it is an unfortunate truism in nearly all meetings I attend. Presenters waste time transcribing their speeches into trivial or, worse, stultifying bullet slides. These speakers are taking a potential asset in PowerPoint and turning it into a liability (Tufte 2003). With some good planning, simple design principles, and relegation of the tool to the status of helping, not leading the presenter, Death by PowerPoint is easy to avoid.

What is the main peril of PowerPoint? Instead of adapting technology to fit the needs of human learners, humans are forced to adapt to the demands of technology. The underlying learning

model for bullet slides is "information as commodity." The learner is assumed to be an empty bucket. All the speaker need do is fill that bucket, one shovel-full (bullet) at a time. More serviceable is an integrative model. With this model the speaker is concerned with audience retention and understanding. Good speakers go beyond just downloading informa-

body of work. Instead, send me your resume! And the third misuse is to assume that repetition is enough—if I see all the words you say you have done your part to help me remember everything. I am not coming to the meeting as an empty vessel just waiting to be filled with facts. Instead, send me the final report.

There is a compelling reason to use PowerPoint (or any other aid). Using multiple media helps learners solve abstract problems and generate ideas by improving information transfer and integration—by one estimate a whopping 89% over just reading a book (Mayer 2001). But there is some bad news. While a little multimedia may be good, too much often hurts. Mayer (2001) discovered that transfer actually goes down when a narrator's words appear on a slide at the same time they are being spoken (e.g., when a presenter reads the bullet points from a slide). Less may be more and variety may be the way to increase information transfer.

My philosophy is that you, the presenter, are the focus of the presentation—not a whiz-bang, electronic slide show. Slides should be visual and aid the audience, not act as a crutch for the presenter. If you have the urge to add a bunch of flashy transitions, color explosions, flying pages, or whatever—resist the urge. Read it as a sign you are preparing your presentation for the benefit of the software, not the audience. Just because PowerPoint has a zillion animations is not an excuse to use them. Each slide and each feature you use on that slide should have a specific communication purpose. For example, avoid fancy screen wipes unless the act of wiping communicates a necessary message of movement or progression so the audience will experience that effect as part of your message. If you think that a fancy transition is cool or will entertain the audience, think again. They may say, "Wow, I ain't seen that transition before" but you will not be communicating your message.

Professional speakers do not direct the audience's attention away from themselves to a visual aid unless doing so specifically enhances communication of their message. Function first. Aesthetics second. Entertainment third. Communicate your message. Then make it pleasing and attractive. Only then consider adding touches of infotainment.

With that in mind, how do you create visuals to supplement, not supplant the presenter?

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"The last thing I remember is the start of the 14th PowerPoint. Apparently, I died of boredom."

Michael Fraidenburg

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tion and do things to improve my retention—the ability to remember facts. Terrific speakers go beyond retention and do things to improve my ability to understand—they integrate new facts into what I already know so I can extrapolate beyond my current boundaries.

Where do PowerPointers go wrong? Seth Godin (2001) believes there are three common misuses. First is using PowerPoint as a teleprompter. I am

not coming to the meeting to watch you read slides. Instead, send me a copy and I'll read for myself. The second mistake is using PowerPoint to "cover-your-backside," especially by handing out hard copies of the slides. I am not coming to the meeting to have you prove you did a

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"My presentation lacks power and it has no point. I assumed the software would take care of that."

Principle One: Do not include anything that distracts the audience or departs from the delivery of your message. Keep it simple! PowerPoint slides should contain only necessary information. If you are not sure, leave it out. Simplify the information on the slides. You can always orally fill in the details for the audience. Remember that while people are reading your slides they are not listening to you. You don't have to give all the information in the slide, just the key points. Are there any reasons to turn your material into electronic slides? Yes!

1. **To present graphical or complex relationships that are difficult to convey in words alone.** Examples are correlations, process relationships (e.g., flowcharts), and movement. Think of these charts as visual shorthand where a big-picture view can help the audience quickly grasp the overall meaning of a large quantity of technical minutiae. If you can do this with words in a reasonable amount of time, leave this slide out. If you find yourself making slides that simply paraphrase the words you are going to use when speaking (a.k.a. bullets) leave this slide out.
2. **To emphasize important information.** The very few times (about twice in a 20-minute presentation) that you need to drive home a critical point, consider repeating that information with a wordy slide. It is better to think of some way to have the slide be different (e.g., a picture that has metaphorical or iconic value) and then speak to that image as an alternate way to visualize the meaning of your words. Limiting slides that repeat the words you speak will keep the experience novel and have a re-enforcing, not boring impact.
3. **To vary the manner of conveying information so the presentation does not become monotonous.** A speaker has a wide array of tools available to create audience impact. The advice from people who study how adults learn is that a speaker should vary communication mode at intervals of no longer than 8 minutes. To have maximum impact in a 20-minute presentation you should deliver with 3 or 4 distinctly different communication modes. And don't get hopeful here. This does not mean talk for a few minutes, do some PowerPoint, talk some more, then do more PowerPoint until your time is up. This means talk, show some slides, have a small group exercise, interview some audience members, walk into the audience and tell a story, do a question and answer, use a prop, do a demonstration, etc. Figure out what kind of presentation variety will work both for the meeting format you've been given and your personal comfort; but, however you do it, put in some variety. Pick presentation methods

that most support communication. Don't just pick something that sounds fun.

4. **To appeal to different learning styles.** Some people learn best from hearing information, others need to see it, and still others need to feel it. A PowerPoint slide show helps visual learners but leaves out audience members with different learning styles.

Principle Two: Manage overload. As a speaker you are in the business of managing scarcity. There are two dimensions to manage.

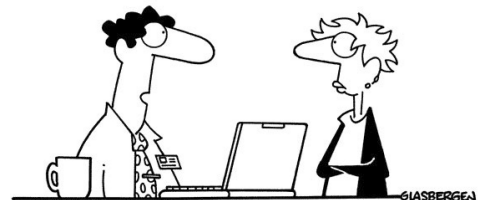
First is managing "opportunity costs" by matching the amount of information to your allotted time for the whole presentation. If you are struggling to figure out how to talk around 20 or more slides in a 20-minute presentation, interpret your struggle as a symptom that you have too much information. Rework your audience analysis to arrive at a more precise judgment about what we most need to know from your limited time with us. At its core, this is the familiar question of allocating scarce resources. In this case the scarce resource is time. Simply because you did a large body of work is not justification to tell us everything. As an audience

we rely on you to make two important but separate judgments—judgments at home about the work itself and judgments at the meeting about communicating the essentials we need to know. Do not resolve the second by simply cramming everything from the first into your time slot. We need your best professional judgment in high-grading to the essential information we need to hear, see, or feel during your limited time in front of us.

The second dimension to manage is the content of the slides themselves. I don't know about you, but as an audience member I struggle with the urge to jump up, shout "Arghhhhhh," and run out of the meeting room when I see a slide that has so much information it is

like reading a page from the telephone directory. As an audience member I am relying upon you to manage my limited ability to assimilate. Ask yourself, "What do I want the audience to remember?" Most of us remember about three

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"What software would you recommend to give my presentation so much flash and sizzle that nobody notices that I have nothing to say?"

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"A live orchestra, costumes, scenery, fireworks, jugglers, elephants, the Rockettes? Can't you just use PowerPoint like everyone else?"

things from a presentation. When you plan your presentation, make sure you give us the key points and that they are well presented. Think about what a slide is. It's a two-dimensional picture of your information, concept, point of view, etc. Artists do not just throw everything they can think of onto the canvas. They design the use of that two-dimensional space to convey a message. Avoid presenting too much information on a single slide. If a slide presents only text, consider leaving it out. Instead, add something (like a picture) that conveys the same message in a different way. That way I can "hear" you say the message while I "see" the message in a different way.

Principle Three: Banish slide reading.

Consider asking a trusted colleague to shoot you if you get caught turning your back to the audience and reading from your slides. Do I really need you if all you are going to do is read to me or is my time better spent having you act as my tour guide and interpret what I am looking at? I am looking for your insight and wisdom, not a prerecorded message.

Besides, I can silently read faster than you can read aloud, so your slide reading sends me into quick boredom. Turn off the screen between visuals. If you are presenting PowerPoint from the keyboard all you have to do is hit the "b" character to toggle the screen on and off. If

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"If I can cram in every fact I've got I'll put everyone to sleep within the first five minutes. Then the rest of my presentation should go pretty well."

you are using a remote you will have to research how this toggle feature is activated for your brand of remote. Blanking the screen may be novel for your audience so you may have to get them used to it. It is worth it because doing so will refocus attention back to you and keeps us from entertaining ourselves by criticizing your slide. By the time you reach the podium know your material so well that the slides are supplements to amplify what your important words mean.

Principle Four: Use good design for the whole presentation, not just the slides. First decide how to use the meeting room to physically engage your audience.

Then, design the best way to portray your information (for example, see Tufte 1983). Do not begin by checking out what groovy features PowerPoint has to offer. Create slides and other audience interactions that anchor listeners to ideas, facts, and concepts; that do not throw your audience into a reading mode; and that enhances instead of supercedes your verbal messages. Then consider the art of slide layout. Can the audience clearly see the slides and quickly grasp your mes-

sage? To do these things you need to:

Manage the Room. Do not darken the room. If you are worried about how well your images will project, fix the images instead of throwing us into the dark. When you become a faceless voice in a dark room the projected images, not you, are the focus of attention. You lose the important communicating tools of eye contact and responding to the audiences' nonverbal behavior (if they nod off in the dark you never know it, but if they nod off in the light you can do something about it). If you are going to engage the audience in something other than listening, get the conference organizers to arrange the room and seating configuration to meet your communication needs. And when problems with the room crop up (e.g., noise from the kitchen), dealing with them is usually better than trying to ignore them.

Manage Viewer Distance. A popular rule of a thumb is the 8H rule: the distance to the person in the last row shouldn't be more than eight times the height dimension of the screen. So, a screen that is four feet high implies the last row should be no more than 32 feet from the screen. This assumes that the people sitting there have good eyes (not my Baby Boomer eyes), the projected image is sharp, and there is no interference such as side light from a window.

Speakers usually cannot change screen or room size. The variable you can manage is font size and shape. When in doubt, bigger is better. New opinions about managing audience distance, based on the physics of the human eye, indicate the 8H Rule ought to be more like 4H for detailed information (Musgrave 2001). From this way of looking at the problem the projected text size should be:

**MINIMUM CHARACTER HEIGHT
NEEDED BY VIEWING DISTANCE**

Distance from the screen	Letter height on the screen
10 feet	0.73 inches
20 feet	1.47 inches
30 feet	2.20 inches
40 feet	2.93 inches

So how does all this translate to your computer screen so you know how to build your PowerPoint? Consider starting with titles at 30–36 points, subtitles at 28 points, and text at 24 points. Now get up from your computer chair, stand back about four (4H) to eight (8H) times the height of your monitor and see if you can comfortably read the material on the screen. If the meeting room is set up with the last row further away than these rules suggest, either make the

image on the screen larger or remove some chairs at the back of the room. If you want PowerPoint to help you adhere to a set of rules like this (minimum font sizes, number of bullets per slide, etc.) click on "Tools" >> "Options" >> "Spelling and Style" >> "Style Options" >> "Visual Clarity." Here you can automatically set these attributes.

Manage Clutter. Create slides that can be understood in 6 seconds or less, contain one point per slide, and feature consistent transitions. Use parallel structure on each screen. Begin every bullet with a verb or have every phrase begin with a noun. Link from point to point and from the current to the next slide. This structure helps the flow of your talk and invites the listener to follow your logic path, not just take in your individual points.

For example, if you are presenting a correlation between x and y, consider showing only that and not extraneous details or information your audience already knows (like axis lines). If you do use a text slide, avoid excessive text. I use a 5 x 5 rule: every slide should have a header of no more than five words and bullet lists are no more than five items (hopefully less) per slide. Clean the clutter from your charts and you convey your main message with clarity (Tufte 1983).

Manage Contrast. Have you ever found your-

Fonts

Minimum Font Sizes to Try:

Title Font (36pt)

Subtitle Font (28pt)

Text Font (24PT)

Sans Serif Fonts are Recommended ,
For example: Tahoma Avant Garde

Serif Fonts are Not Recommended,
For example: Palatino Times New Roman

self squinting to read a slide even when the font size is large? The usual problem is insufficient contrast between the text color and background color. There are two schools of thought about the best contrast combination. Option One: The most common advice is to always use a medium to dark (usually blue) background with light-colored text. Option Two: Use this light-text-on-dark-background scheme in a dark room and a dark-text-on-light-background in a room with a lot of ambient light. Check it out to see which option you like best. I like Option One because suddenly

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flashing a slide with a bright background in a dark room is visually jarring—much like suddenly turning on the lights in a dark room.

Use sans serif fonts such as Arial, Tahoma, Franklin Gothic, or Avante Garde. They are simpler, clearer, and show up better on the screen. Serif fonts such as Times and Palatino tend to blur when projected. Font colors should be in the range of whites to yellow for dark backgrounds and black to dark blue for light backgrounds. Avoid red or green as about 8% of males are blind to these colors and for the rest of us these colors do not project well. Many times colors look fine on a monitor but change when projected. If time permits, it is wise to check the colors on the projector you will actually use.

Manage Image Quality. When placing scanned images into your presentation, be sure to scan them with a resolution of about 100–150 ppi. Images scanned at a greater resolution merely use up space and slow down your presentation. Shoot for an image size of 640 x 480 pixels. Image file formats are important. Use gifs when you want a small file and detail doesn't matter. For example artwork using less than 256 colors or cartoon-style artwork is well suited to the gif file format. Avoid

gifs for complex color reproduction as they tend to de-construct and erode tonal styles into an amateurish mess. JPEGs are great for pictures where range of color is important but they lose detail. TIFFs provide superior clarity and detail but are large files. When using photograph scans, digital photos, or full color artwork displaying subtle transitions of grays or millions of colors, tiff and jpeg are perfect. For older presentation hardware it might be faster to use jpeg over tiff files. Image editing programs like Photoshop®, Painter®, and Paintshop Pro® will save copies of tiff files to more compact jpeg pictures for slightly faster slide loading. This might be a real advantage for presenters using older laptop processors, though most presentation hardware after the year 2000 make this speed difference a nonissue.

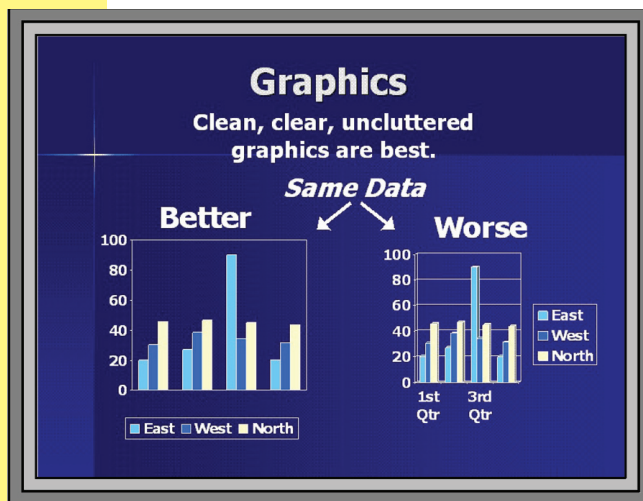
These are the basics that will make your presentations stand out and avoid Death by PowerPoint. For more advice see:

www.presentationhelper.co.uk/presentations.htm

[www.conceptron.com/articles/pdf/](http://www.conceptron.com/articles/pdf/legibility_of_projected_information.pdf)

[legibility_of_projected_information.pdf](http://www.conceptron.com/articles/pdf/legibility_of_projected_information.pdf)

http://library.humboldt.edu/ic/general_competency/gc_index.html



As an audience member I am trusting you to make good use of my time. The most important objective is that I remember your key points—not the slide show.

The most important visual aid in the room is YOU!

Acknowledgment

Thanks to digital artist Ted Larson (<http://home.earthlink.net/~theoison/Index.html>) for the advice presented on slide design.

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