

## Things That Can Go Wrong with Powerpoint Presentations

Computer-based projection of slides for scientific presentations has displaced conventional slides and transparencies within the last few years. This, however, also means that most users of LCD projectors have little experience with this tool. To spare users the hiccups associated with learning from their own mishaps, I have compiled a list of problems and precautions (Table 1). The list is based on observations at two international conferences 2003 (Annual Meeting of ESA in Savannah, Georgia, and Annual Meeting of GfÖ—Ecological Society of Germany, Austria, and Switzerland in Halle, Germany), comments of colleagues, and personal experience.

Computer-based presentations involve many components that must collaborate: storage device, computer, projector, and presentation program. Although these components are supposed to be compatible, they are not as compatible as their manufacturers would like us to believe.

*Storage devices and computer:* CDs are the most frequently used storage medium. CDs, however, can be defective and some computers may refuse to read the data. Floppy disks get out of use because presentations often make use of pictures whose resolution is unnecessarily high. The resulting files are too large to fit on a high-density disk. Some newer computers do not have floppy drives, but it may still be a good idea to have the presentation on a floppy disk as a backup.

The role of floppy disks has been taken over by USB memory sticks. They require special drivers on a computer. If the driver has not been preinstalled, the memory stick won't work. Older computers, that may still be in use at universities, do not have a USB socket or the sockets may not be accessible (i.e., at the back side) when the computer is permanently installed in a lecture hall.

*Projector:* The resolution of newer projectors is good and the projectors adapt to the resolution sent by the computer. Older projectors are set to one resolution and image scan frequency. Other resolutions fed by the computer will result in poor quality with unreadable text and missing lines. Other frequencies will cause "running" images. Most computers have a key combination (hardware dependent) for feeding the

image signal to the projector. A restart is usually not necessary.

*System software:* Windows (Microsoft) is the dominant system, but Macintosh (Apple) should be kept in mind. The Macintosh system is more widely used in academic institutions in Switzerland, Sweden, and North America than in other regions.

*Presentation program:* PowerPoint by Microsoft is the most commonly used program, but it is not universal. Acrobat Reader also has a built-in presentation module, which means that most programs can be used to prepare presentations. PowerPoint comes in different versions that are not completely backward compatible and whose properties and abilities depend on program version, system software version, and certain helper programs installed on the computer. It is a common problem that characters from special fonts (e.g., mathematical symbols, bullets, icons, superscripts) used in the presentation are not available on the conference computer. They are replaced by others that can cause missing symbols, changed line breaks, and other unaesthetic and confusing changes. Graphics not stored within the presentation file rely on import filters that must be present on the conference computer. Animation of objects may also be affected by incompatibility among versions and, consequently, may fail. Another problem is that the layering of objects can become reversed. Thus, background objects can cover other objects. Finally, colors may also change when settings differ among computers.

Most problems can be avoided by following these simple suggestions (see Table 1):

- prepare the presentation for the computer environment offered for the lecture,
- use your own computer for the presentation (at the risk of incompatibility with the projector),
- store the presentation on different media (including transparencies) and in several formats (the original, an older version of the presentation program, and as PDF),
- finally, check the presentation ahead of time on the computer that will be used.

Martin Köchy • Department of Biochemistry and Biology •  
University of Potsdam  
Maulbeerallee 2 • 14469 Potsdam, Germany  
+49 (331) 977-1974  
E-mail: martin.koechy@gmx.net

Table 1. List of common problems and suggested solutions regarding computer-based presentations.

<i>Cause</i>	<i>Problem</i>	<i>Solution</i>
<b>Storage medium</b>		copy of presentation file on different media
diskette	no diskette drive	
	diskette not readable	
memory stick	no USB socket	
	no driver for memory stick	
ZIP etc.	no ZIP drive	
CD-ROM	CD not readable (write error or incompatible CD format)	
<b>System software and environment</b>		use your own computer
	no communication between computer and projector	use the computer provided by the organizer
	presentation program incompatible with system software	use a platform-independent file format (e.g., PDF)
	missing fonts and symbols	don't use rare fonts or symbols, use the PDF format with included fonts
	missing import filter for pictures or sounds	store graphics and sounds inside the presentation file
	reduced color space	use standard 256 colours
<b>Projector</b>		
	low resolution: lines disappear, text is hard to read	use sans-serif fonts like Helvetica or Arial, use bold text, avoid thin lines (in plots, tables, etc.), set the computer to the lowest resolution
<b>Presentation program</b>		use your own computer
	animations don't work	test your presentation on several computers with different versions of the system software and the presentation program
	layering of objects mixed up	