



KnowledgePresenter®

Software Simulations Contents

Creating Software Simulations.....	2
What Software Can I use to Create Software Simulations?	2
Considerations for Best Software Simulations.....	2
System Setup.....	2
Memory.....	2
System Settings	3
Graphics Settings	4
Resolution.....	4
Resolution Solution.....	5
Capturing the Movie.....	7
Audio or Not?	7
Making the Simulation Realistic.....	8
What Format Should I Export the Simulation In?	9

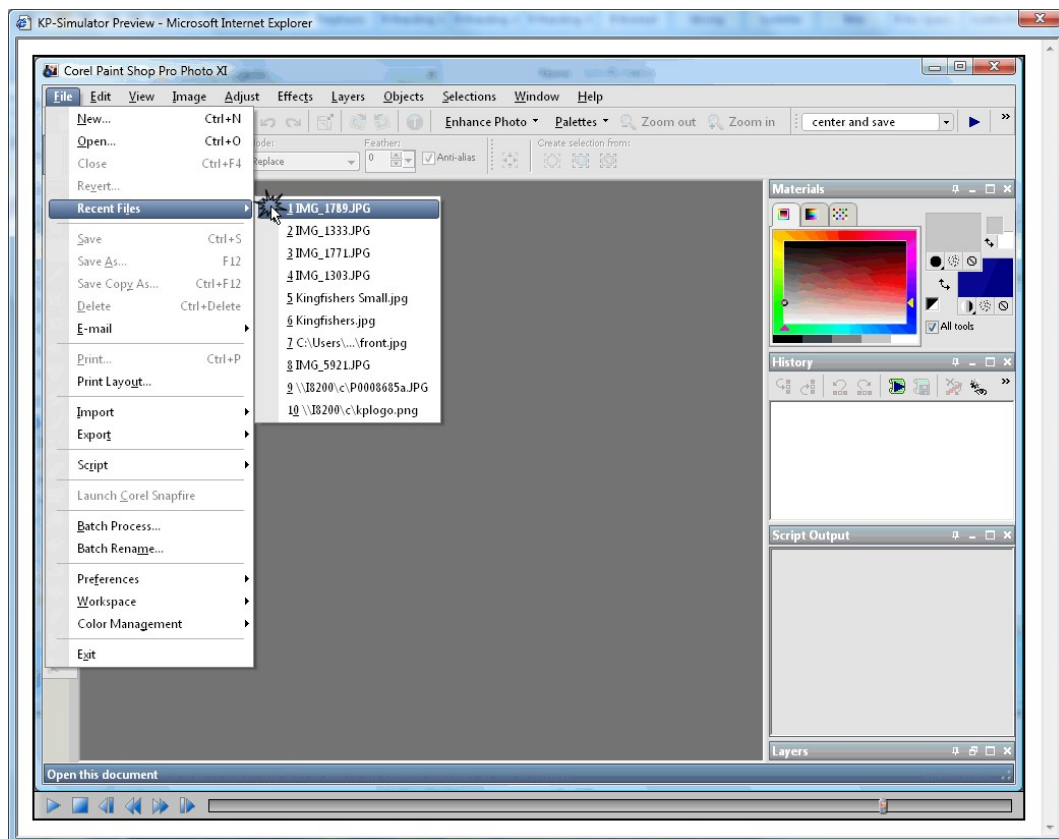
Creating Software Simulations

Software simulations are a great way to illustrate to end users, employees and customers how software works. They can see, at their own pace, and in their own time, exactly how software operates and how it is used.

What Software Can I use to Create Software Simulations?

Of course, we recommend that you use **KP-Simulator** to create your software simulations. See <http://www.knowledgepresenter.com/assets/kpsim.htm> for more information about **KP-Simulator**, and to get a free 30-day trial.

The way **KP-Simulator** works is very simple. Basically it is a screen recorder – turn it on, and it records everything you do on the screen. Once you have finished recording, you can edit the frames, add watermarks, edit timing, add title frames and other text boxes, record some audio (you can also record audio as you are capturing your movie). Finally, you can export the simulation as Flash, Windows Media, or Animated GIF format (you can even export to Microsoft PowerPoint or Microsoft Word for printed documentation).



Screen shot of a software simulation created in KP-Simulator.

Considerations for Best Software Simulations

When preparing to capture and create your software simulations, there are several things you can do to ensure the simulations you create are of high quality, and of low bandwidth. In this white paper, we'll look at some of the considerations you can take in order for this to happen.

System Setup

There are a number of simple ways you can ensure your system is best setup to capture software simulations. These are covered below.

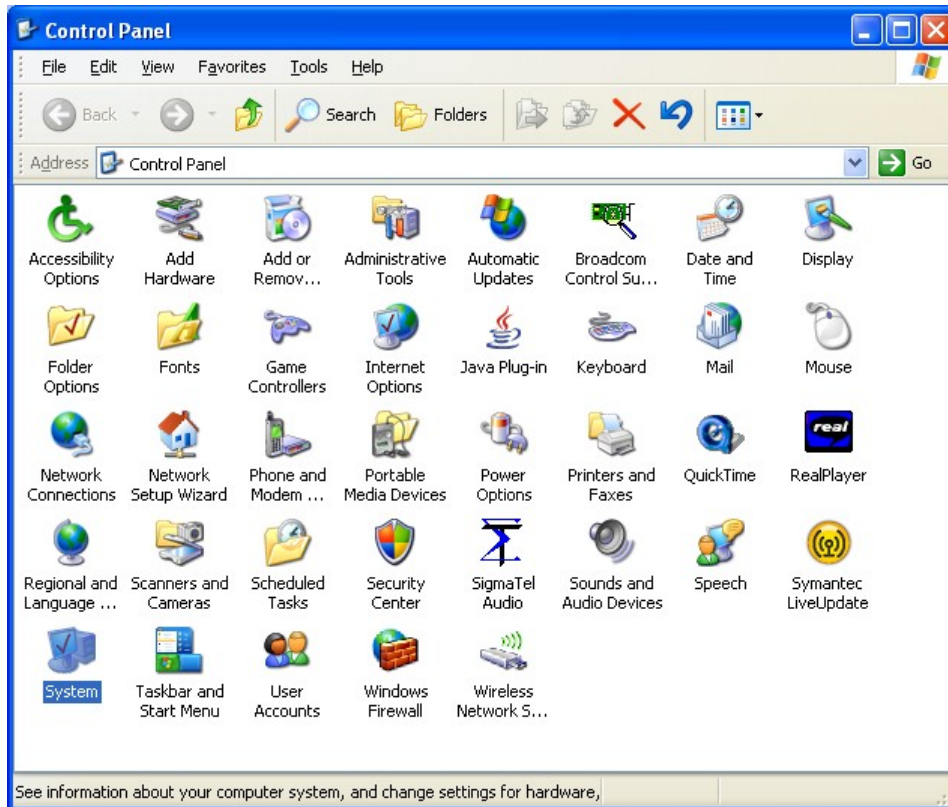
Memory

Capturing software simulations can require a lot of memory, depending on the technique you use to capture the simulation, the length of the simulation (i.e. how many minutes does it run for), and the size of the simulation (i.e. the pixel size – 1024x768, for example). So it is important that you have as much free RAM and disk space (for memory swapping) as possible. This means shutting down unnecessary programs, and perhaps upgrading the RAM in your system.

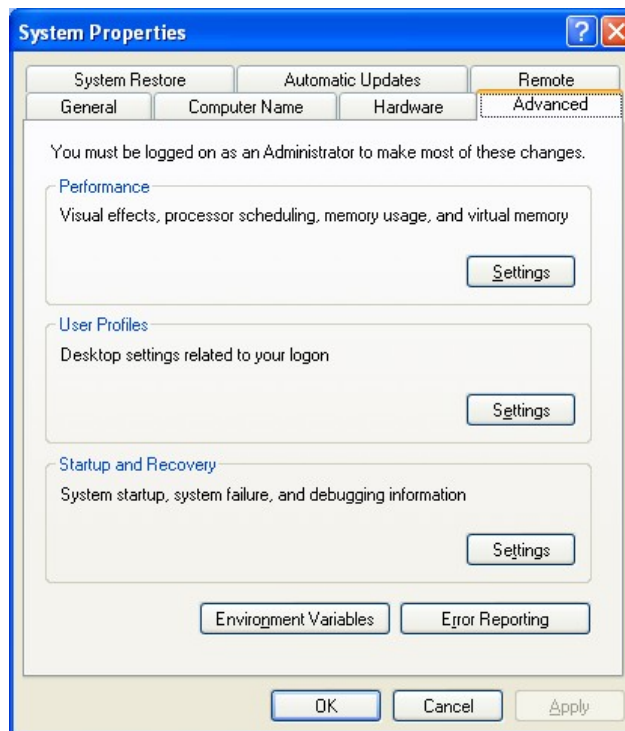
We cover the other considerations that affect RAM further in this white paper.

System Settings

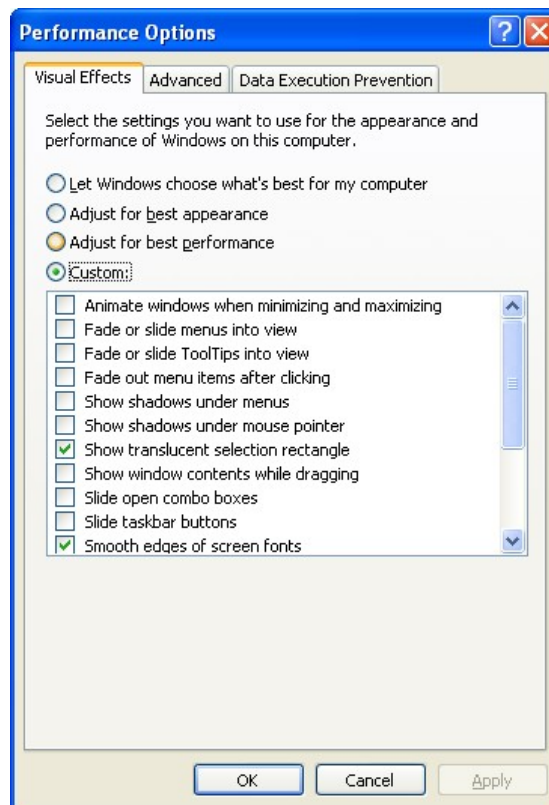
Windows XP allows you set to set a number of different settings that can affect how well a software simulation is captured and created. These are set using the **Control Panel**.



From the **Control Panel**, start the **System** applet.



When the **System** applet appears, select the **Advanced** tab, so that you see the settings something like those above.



The dialog box called **Performance Options** will then appear.

Generally Windows is by default set up to adjust for Best Appearance, rather than Best Performance. Here are the settings we recommend you select for best performance when capturing your screen movie:

- Select the **Adjust for best performance** radio button. This should remove the check boxes from all the options in the **Custom** list.
- From the **Custom** List, select the following options to ensure they are on:
 - Show translucent selection rectangle
 - Smooth edges of screen fonts
 - Use visual styles on windows and buttons.
- Even the options above are optional – the only one that will make a real visual difference is the **Visual Styles** option – with this turned off, Windows XP changes to look more like earlier versions of Windows.

Graphics Settings

If the mouse cursor appears to be move jerkily around the screen when capturing your simulation, you may need to turn hardware acceleration off to get better results. On Windows XP, this is achieved by:

- Opening the **Control Panel**
- Opening the **Display** applet
- Click on the **Settings** Tab
- Click on the **Advanced** button
- Click on the **Troubleshoot** tab
- Set the **Hardware Acceleration** slider back all the way to the left
- Deselect the **Enabled Write Combining** check box.
- Close the dialog boxes down by clicking on **OK** in each one.

Resolution

Now the big question – what resolution should I be in when capturing my screens? There are several things to take into account. Here we assume that the end result of your software simulation is that the simulation is going to be played back in a browser over the web or intranet, CD-ROM, or DVD.

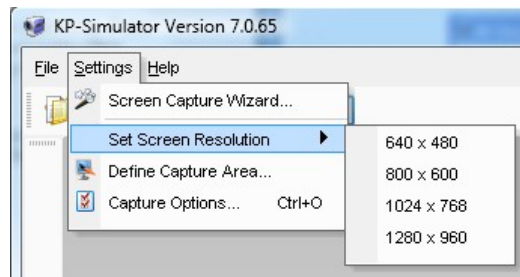
It is easy for most to simply capture at the resolution they normally work out. Let us assume this is 1024 x 768 pixels at the moment. However, this can present problems.

When you capture a movie at 1024 x 768, for example, ideally it should be played back at that resolution. However, if you are playing the movie back in a browser, then you have to cater for the browser title bar, the borders, and quite often, depending on the format you exported the movie at, some navigations buttons below the movie allowing the user to stop and start the simulation.

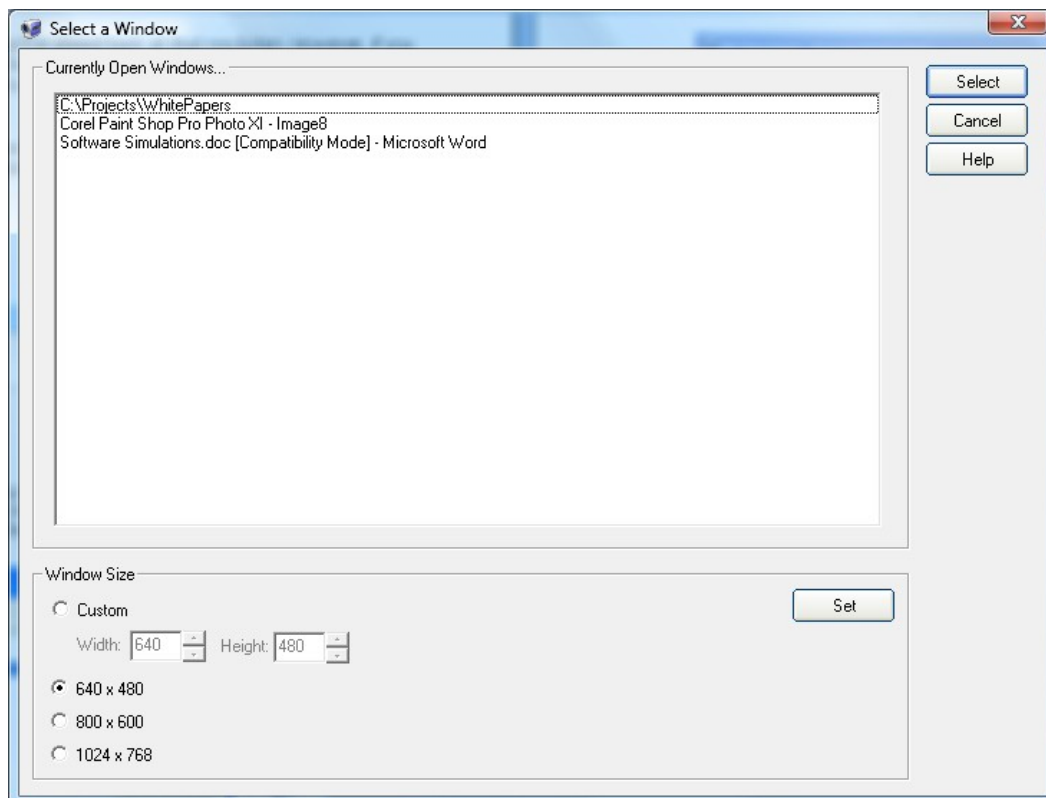
This generally means that for a user to play back a simulation captured at 1024 x 768, they have to be running in a resolution higher than this. The same goes for each resolution you select – if you capture at 800 x 600, then the end user is probably going to have to run in 1024 x 768 to play this one back.

Resolution Solution

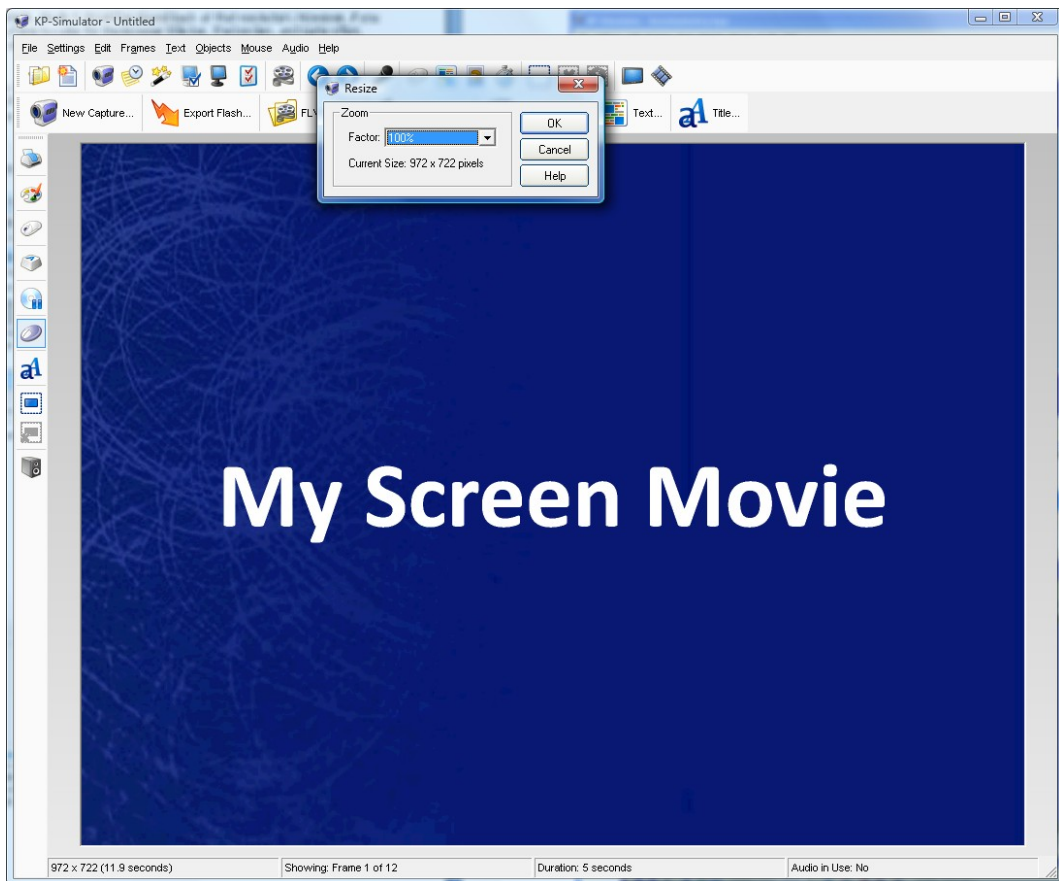
KP-Simulator can help in this regard in several ways.



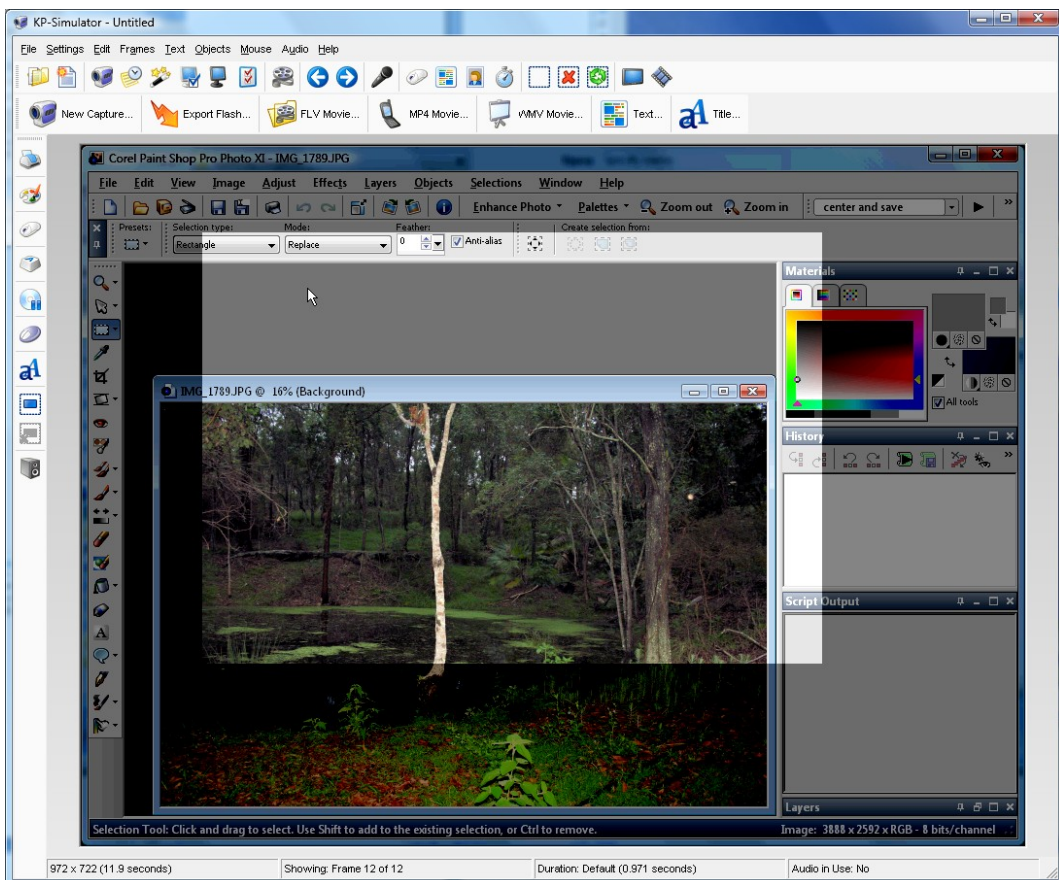
First, KP-Simulator lets you change screen resolution by selecting a simple menu command. Always run in the smallest resolution possible to capture your screen simulation – this ensures it will play back on as many systems as possible.



Second, KP-Simulator allows you to select and size any open window to a specific size. So you can, for example, select a window to capture from that is perhaps a little smaller than the resolution you want someone to be able to play it back in. Above, we've selected 720 x 550 as a window size, which means this will play back quite happily on an 800 x 600 display, without having to go all the way back to 640 x 480 to capture.



Third, KP-Simulator does allow the movie to be resized after capture. Although this is not ideal, you can still get quite good results from resizing a movie before export.

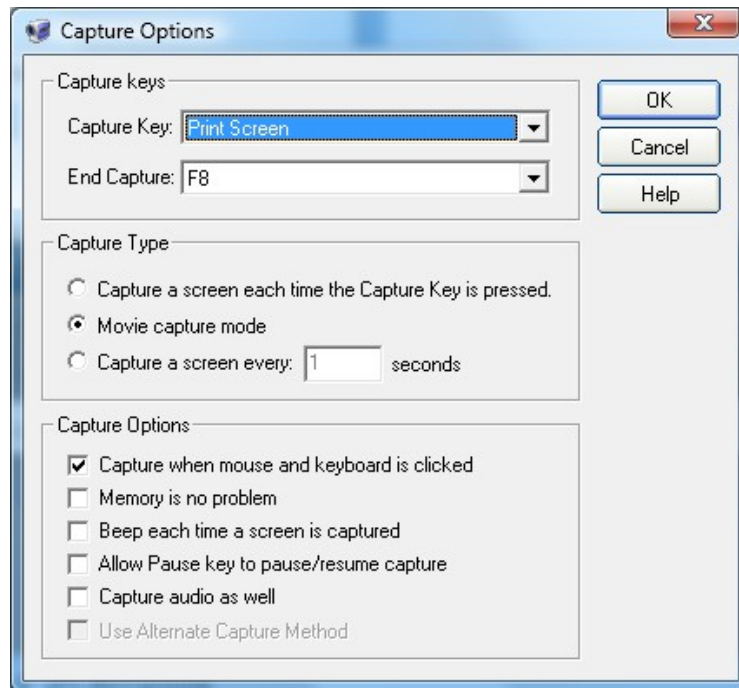


Finally, KP-Simulator allows you to set regions, that can be moved around from frame to frame, so that you are looking at only one part of the screen at any one time.

Capturing the Movie

OK, so you have set up your system, and are ready to capture the movie. Here are a few good ideas when capturing your movie with KP-Simulator.

- Initially, use all default settings. KP-Simulator will use, by default, what it calls *Movie capture mode*. This is where it constantly keeps a track of the mouse position and buttons, keyboard buttons, and captures one screen every second or so. The end result is that the movie appears to be a smooth flowing representation of exactly what was captured, while taking up as few system resources as possible. You can change settings via the **Screen Capture Wizard**, or the **Settings / Capture Options** command.



- Take your time. Don't try to race through the simulation. When clicking, slightly exaggerate each click, and hold it in position for just a little longer than you normally might. This ensures that KP-Simulator registers the mouse click, and behaves accordingly. It also ensures that the user watching the simulation is not dazzled by your speed. If you are creating a simulation without audio, then KP-Simulator allows you to alter the speed at which the simulation is played back, using the **Frames / Adjust Default Frame Timing** command.
- The length of the movie may depend on how much RAM you have available, and how much action goes on while capturing the movie. But generally, keep the movies down to 5 minutes or so – you want to ensure that you deliver your presentations or demonstrations as succinctly as possible, without losing the users attention.
- Make sure you are not disturbed. While you can pause capture (if you are not capturing audio), you'll easily lose your train of thought if you are interrupted half way through recording a simulation. If you are capturing audio, turn off your mobile, take your phone off the hook – it's quite annoying to get even five minutes into recording a simulation, and the phone rings!

Audio or Not?

Whether you decide to incorporate audio into your movie is a decision really up to you – perhaps you know that the users of your simulation will not have a sound card or speakers, or perhaps you are unwilling to add to the bandwidth of the movie that audio inevitably will do. Personally, I think yes, if you have a choice – most users would rather listen than read – and it also makes the simulation appear more like a live demonstration, rather than a prepared presentation.

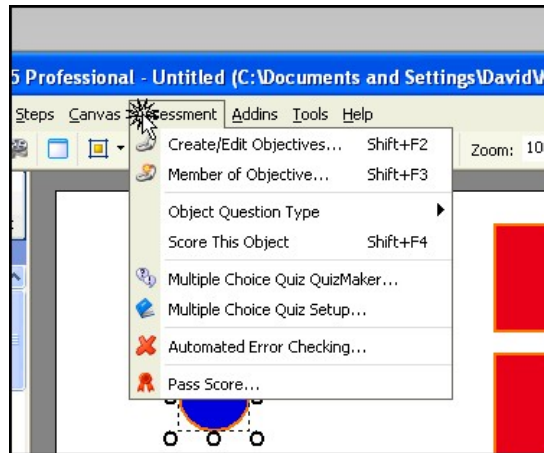
When recording audio, use a headset microphone – these are quite inexpensive, and give great results on most machines – as well as the most flexibility. It is quite awkward to otherwise have to keep your mouth close to a standard microphone when you are trying to concentrate on what is going on on screen.



Making the Simulation Realistic

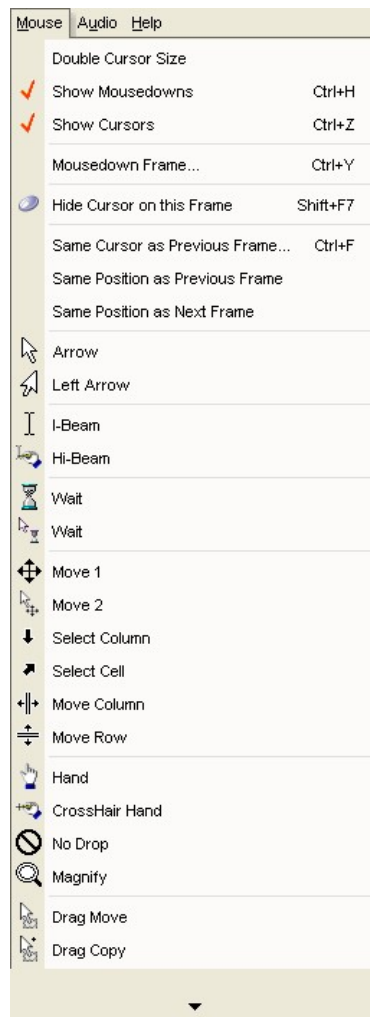
After you have captured your simulation, KP-Simulator allows you to edit the 'movie' in a frame by frame basis, if you wish, before exporting or saving the simulation. It is worthwhile having a quick look through each frame, to check, and if necessary set:

- Which frames are mousedown frames (mousedown frames are set automatically by KP-Simulator during capture. However, you can make any frame a mousedown frame or otherwise during this editing period. A frame that is a mousedown frame will have a small 'flash' appearing around the mouse so that the viewer knows the mouse was pressed – and if you export in Flash format, a mouse click sound will also be used).



Note the image around the mouse cursor – this is a mousedown frame.

- The mouse cursor. In the **Mouse** menu in KP-Simulator, you can change the mouse icon on any frame to one of a wide range of icons. This is optional, but it can make the simulation even more realistic. You can also determine whether in fact on any particular frame, the mouse cursor is required at all. Finally, using the cursor keys on the keyboard, you can move the mouse position on any frame anywhere, just in case it appears in the wrong spot on any one frame.



The **Mouse** menu can be used to change, on a frame by frame basis, the cursor appearance, size, and whether it appears at all.

What Format Should I Export the Simulation In?

Ideally, you should export the movie from KP-Simulator in Flash format. This ensures that it will be able to be played back on more systems than any other format. Yes, it means that the user will require the Flash MX plugin, but this is generally more widely available, and compatible with a wider range of browsers than something like Windows Media Player.

You can also export in MP4 format, if the target is for IPOD, or other portable devices.

Windows Media Format may be the best idea if converting for portable Windows devices, or Windows in general.

FLV export is also a very flexible way to export, and although you will get more flexibility with this option, you won't get the same quality.

Exporting to Windows Media Player can be an issue where you do not know what version of Windows Media Player your target audience has. Also, with Windows Media Player, the version of the player is not the only consideration – there are also audio and video codecs used by Windows Media movies that the end users must have installed.

Animated GIF is a good option for small in size and length animations – particularly when you want the simulation to be a part of another web page, incorporated into a KnowledgePresenter document. The real advantage of Animated GIFs are that they require no plugins oractivex controls to play them back – they play back natively in just about all browsers on all platforms. The main disadvantage is generally that the simulations cannot be very long, or very large – most browsers just cannot handle Animated GIFs that are too big. They can also be larger on disk than other formats.