

SqueakCMI Notebook: Projects, Tools, and Techniques

Introduction

Welcome to eToys/Squeak: an object-oriented programming language. This notebook was written to introduce Squeak to curious beginners with step-by-step descriptions of projects and how they were done.

Advice is freely given in the hope that the path you take to learning eToys/Squeak is quick and smooth. The Squeak community will be generous with their time, their knowledge, and their willingness to help newcomers. The Office for Mathematics, Science, and Technology Education at the University of Illinois Urbana-Champaign invites you to use these materials to the benefit of students everywhere.

These projects can be explored on the computer by opening them from www.Squeakcmi.org. This dynamic experience of projects on the computer in conjunction with the written materials should give you a range of ideas and possibilities to combine in many ways and for many purposes.

Section I

This section contains two easy projects designed to help you get started with Squeak. They are followed by an extensive description of the rich resources, tools, icons, supplies, and conventions that make Squeak what it is.

Section II

This section explains more complicated projects. They are in alphabetical order by the name of a Squeak tool used predominantly in that project. The projects are not in sequential order by level of difficulty. The project's name can be used to locate that project at www.Squeakcmi.org. So, if you wonder, "What is a scale factor and how could it be used in a Squeak project?" you can find out.

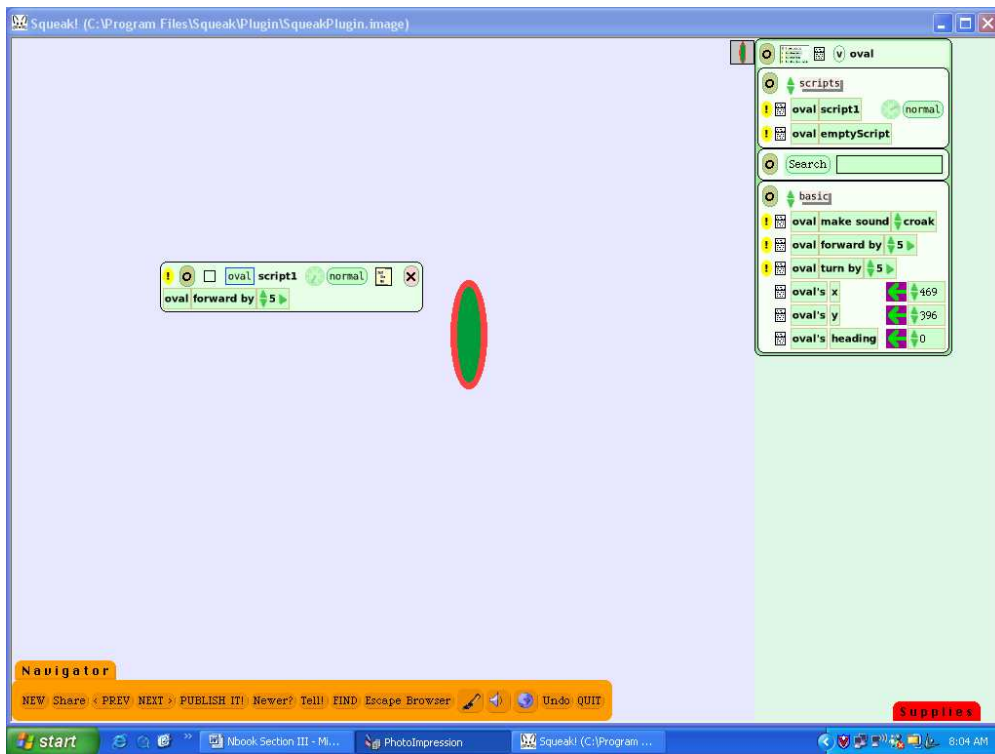
www.Squeakcmi.org

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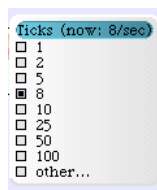
Ticks per second2: ovalnb

This project shows how to change the number of times a script runs per second.



The oval object has a script that moves it forward 5 when the script is running. The five refers to pixels of distance on the screen. Make the script run more times per second than the default, which is 8 times per second, by clicking and holding down on the small round green click next to the word normal.

A menu opens and shows what the setting is with a marking in the box next to the number.



Click on the new number of ticks per second you want the script speed to be.

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One tick per second will make the object move once per second. If your script says forward 500 then object will move that distance on the screen once per second. Choosing 100 ticks per second for the same script will make a huge difference in what you see.

Other allows you to set any number you wish. It is possible to type in a decimal number such as .5 and then the script will run once every two seconds.

Other also permits you to enter any large value you want to try. In actual practice, your computer's processing speed will limit the results. If you have an old and slow computer and you type in 500,000 ticks per second your computer will probably freeze because it will try to do that and it will not be able to finish the task. Move forward by 500 and do that 500,000 times per second is asking the computer to move some object a big distance that many times every second.

