Computers & the Humanities 281

Introduction to Revolution

Revolution Generalities

This semester we will be working with a new program called Revolution. It is finding great acceptance among small developers, educators and programmers needing a rapid development or prototyping tool. Revolution is the latest in a long line of "high level" development tools that can trace their roots to a very influential and popular program, HyperCard. In order to understand what Revolution is all about, let's look briefly at HyperCard.

When HyperCard appeared in 1987, most people didn't know what to make of it, because nothing like it had ever been created for a mass audience. Bill Atkinson, the author of HyperCard, called it, "an authoring tool and an information organizer … and sort of a cassette player for information." Danny Goodman, author of several "how-to" books on HyperCard, called it "a self-contained programming environment for non-propellerheads." It has been called a "software Erector Set" because, like the Erector Set you got for Christmas, it has pieces that can be put together into almost anything (Legos would be a modern analogy if you've never seen an erector set).

Fundamentally, what HyperCard did was to allow non-programmers to assemble collections of different kinds of information—text, graphics, sounds, etc.—and link them together in various ways in a process called "HyperLinking" or "HyperMedia". In fact HyperCard was an early inspiration and model for the Web browser—a way to quickly link all sorts of information in a single, integrated environment.

Now fast forward to 2003. HyperCard has not had the benefit of constant updating from Apple Computer, so several contenders have appeared as heir apparent to the HyperCard legacy. The latest and most promising of these is Revolution. Let's look at some of the basic capabilities of Revolution.

Revolution has elements of several different kinds of programs:

Programming. Revolution includes a powerful programming language with almost all of the capabilities of a general-purpose programming language like Pascal or C, plus custom capabilities for dealing with the Revolution environment. It has many features of "object oriented programming," a current computer science buzzword. A serious investigation discloses that Revolution can meet all your programming needs.
Database. Revolution can do database kinds of things like store, organize, sort, print and otherwise manipulate data. But it is not intended to replace database managment software; in fact Revolution can be linked to sophisticated DB programs. (We won't talk much about these capabilities in this class.)
Painting. Revolution has a versatile set of color graphics capabilities, and can produce bitmapped, or pixel, graphics like Photoshop as well as object graphics like Illustrator (though on a much more basic level.)

The *hyper* part in the name HyperCard and the terms hypermedia and hyperlinking refer to the idea of associated/linked information. For example, when you are reading something in a book and come to a term you don't understand or want to know more about, you can go to a dictionary or an encyclopedia. Once there, you might find something else to look up. Then look up something else and then something else and so on. Of course, you're not limited to just books. You could go to a film library, or talk to an expert on the subject, or any number of other resources. In a hypermedia system, in its ultimate sense, all of this is available from your computer (some attribute this vision of hypermedia to Vannevar Bush, an influential mathematician and scientist in the middle part of the twentieth century).

The general metaphor for Revolution is a stack of index cards. Each card has some information on it. A collection of cards constitutes a *stack*—generally cards with similar or related information. The standard size for an index card is 3x5 inches. There is no standard size *per se* for a Revolution card, but commonly it would match the common screen resolutions on computer monitors—640x480, 800x600, and 1024x768 pixels are often used. (pixel = picture element = dot on the screen) Both index cards and Revolution cards come in other sizes when needed. A particular card can have different kinds of things on it:

Graphics. On an index card, it might be drawings or doodlings you make with a pencil or pen. The graphics on a Revolution card may come from several kinds of sources.
- You can get detailed graphics with an optical scanner.
- You can also use "clip art" graphics—drawings that someone else (presumably with more artistic talent than you) has created. Some free collections are available on the internet comes with Revolution and there are many other commercial and public-domain clip art sources. (e.g., CD-ROMs)
- You can create your own graphics by using Revolution's built-in graphic tools.
- You can import graphics directly from other programs such as Photoshop or Paintshop Pro. - You can import graphics from other programs through the clipboard.
- You can simply place a reference to an outside graphic file on your card.

Text. Both an index card and a Revolution card can have text on them. Revolution uses text fields—rectangular boxes on the card that can hold text.
Buttons. Buttons are unique to Revolution cards. Buttons are things you push—i.e. click on. Buttons on a card typically *do* something when you click on them.
Multimedia. Revolution cards can present audio and video clips, allowing one to utilize more than just graphics and text in the development of an application.
Menus. Menus are also unique to Revolution cards. Menus allow you to access functions of your computer or provide an alternate way of navigating through your stack. They integrate your stack into the standard GUI environment of your computer's operating system.

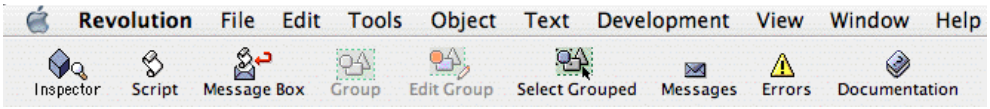
So what is Revolution? Ah, that is the question. For the purposes of this course, it is a multimedia authoring tool. However, it obviously much more than that. As someone noted, Revolution is "HyperCard on steroids and amphetamines running on multiple platforms."

Revolution Specifics

Now that you have a general introduction to the history behind and the concepts underlying Revolution, let's cover some the of the specific basics you need to understand in order to have Revolution operate effectively for you.

First of all, when Revolution is launched it opens in what is known as the "Revolution authoring environment." This is where you are allowed to create and modify Revolution stacks. If you launch a stack by itself, it will not open in the Revolution authoring environment, but will instead open as a standalone application (as best it can). Consequently, when you have created a satck and wish to alter it, it is best to open the stack from within Revolution.

Within the Revolution authoring environment there are several tools at your disposal. We will discuss a number of these to varying degrees of thoroughness. Initially you need to be aware of and become familiar with a few features within the authoring environment in order for it to work effectively for you.

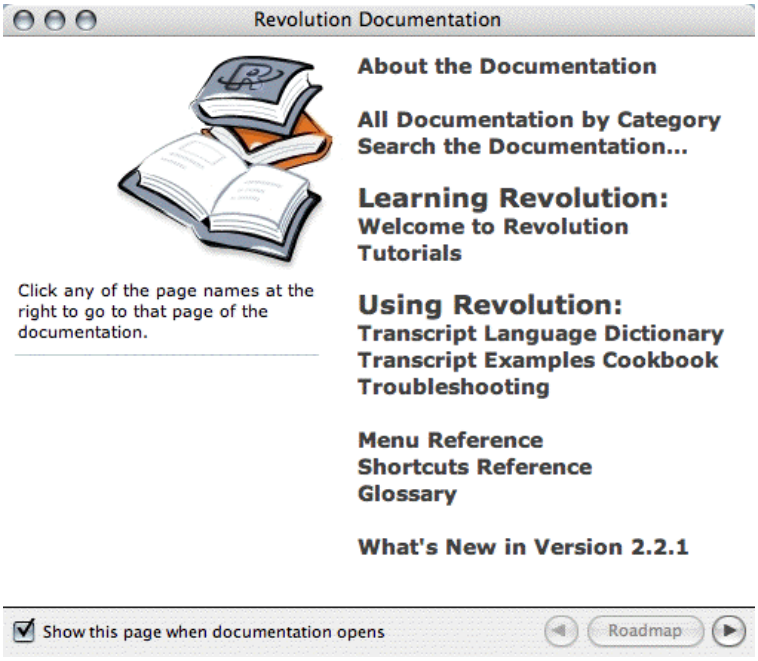


The first item with which you need to familiarize yourself is the menubar and the toolbar as displayed above. If you do not see the toolbar, you will need to go to the **View** menu item and select **Toolbar Text** and **Toolbar Icons** as needed. As you will notice, some of the items in both the menubar and the toolbar are "greyed out," indicating that they are not currently available. This changes depending upon which items are active within the authoring environment. The toolbar is somewhat redundant as all its functions are contained within the menubar (hence the ability to hide the toolbar). However, it provides quick and easy access to a number of the most frequently used commands in the authoring environment, so its presence it quite welcome.

The other item which should be present is the tools palette (as shown above). If this is not visible, you need to go to **View** again and select **Palettes**. You will use this palette frequently. As with the toolbar, it is a quickly and easily accessible means to activate several menu commands, i.e., its presence is not essential, but it makes working in Revolution (particularly the more repetitious actions) infinitely more facile.

You first need to be familiar with the top two items on the tools palette, the "Browse Tool" (the "hand") and the "Pointer Tool" (the "arrow"). By default when you first open Revoultion, the pointer tool is selected and active. This is what allows you to create and edit objects within the authoring environment. By selecting the browse tool, you may then check the functionality of what you have created within the confines of the authoring environment to see how it will operate. Selecting the pointer tool again will then allow you to make changes and modifications. We will discuss the other items on the tools palette in due time.

Some of the other features of the authoring environment include "tool tips." These appear each time you allow the cursor to hover over an active item in the toolbar and tools palette. The tool tips give a hint as to the function and purpose of each of the items. There are also a number of keyboard shortcuts which allow you to perform an action or command even more quickly than with the toolbar. These shortcuts are found either in the menus or in the documentation.



Speaking of documentation, Revolution has a number of reference sources that you can access either through **Help** in the menubar or **Docs** in the toolbar. While a number of these resources extend to a depth beyond the pale of this course, you will nevertheless find them quite useful in answering many of the questions that may arise as you work with Revolution.

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