

1. What is a Viewlet and why did you choose this technology over other streaming formats?

I was finding that what I bring to the table as a Faculty member -- substantive expertise -- was getting sidetracked so that I could attend to logistical details (such as how to install SAS, or how to download financial data into JMP-In) for which an online tutorial would be just as effective as a human being (me) saying to the students, every semester, “first you do *this*, then you do *this*, then you click on OK”, etc.

When I realized that my time was getting eaten away with basically administrative tasks, I went on the warpath looking for a tool by means of which I could facilitate online tutorials. The tool needed to have several characteristics: it needed to be free, to be available online for access by all students, to be easy to use, to require minimal technological skills, and to be just as effective at 28.8Kb (the speed of a standard modem) as on a high-speed network.

The search took me to the website of a small company named Qarbon.com, which provided a free computer program called “ViewletBuilder”. This program enables an instructor to create very small files, called “Viewlets”.

2. What is a Viewlet?

A Viewlet is a collection of screen snapshots which have been annotated, visually (by way of “balloons”) and/or with sound, which take a student through the exact actions they need to perform in order to solve a specific computer task (e.g., install SAS on their PC). They can be stored for access from an instructor’s internet account (mine are publically available at <http://www.gwu.edu/~mgt225/qarbon>) or from an instructor-provided CD. Viewlets are accessed via a standard browser (e.g., Internet Explorer, Netscape), are small, are fast, are completely platform-independent, and require no plug-in.

3. How did you formerly accomplish the tasks for which you currently use Viewlets?

I scheduled special lab sessions in one of the on-campus computer labs. Typically, only about half the class was able to attend the special lab sessions, and the other half struggled to get up to speed.

4. Why did you choose Viewlets as opposed to other types of technology?

I have had very bad experiences with streaming. Students kept alerting me to problems that they were having gaining access to the streaming files I had put online for them. The most common complaints were that the files were too large to download in a reasonable period of time, or that the “streaming” didn’t “stream” properly during busy periods on the internet.

Viewlets are typically **very** small (usually less than 200K), meaning that they require very little time to download to a user’s computer, and can be accessed directly from a user’s browser, so there is zero startup time. In this day and age, these are extremely unusual attributes.

5. Can you give me some use cases or examples from your own experience that illustrate their usefulness?

I use Viewlets to show my students the exact screens they will see and the exact buttons on which they should click to install software needed for my classes. This software includes SAS, the Adobe Acrobat reader, RealOne player, browser plug-ins, etc. I also provide Viewlet tutorials to my students on such topics as downloading financial data into statistical packages, creating Box and Whisker Plots in JMP-In, etc.

6. How have your students reacted to this technology? How did it impact your courses?

The student response has been enormously positive. The inspiration for Viewlet tutorials often comes from student feedback, and it rarely takes more than about a half-hour to prepare a Viewlet (and usually requires only 5 or 10 minutes), so I have created quite a few of them. The students have expressed considerable appreciation.

7. What are the potential impacts on student learning at the University?

I tend to use Viewlets exclusively in situations where I would otherwise be standing in front of a group of people saying “first you do THIS, then you do THIS, then you do THIS,” etc. There is no reason for a Faculty member to be spending his/her time doing that sort of thing; that is essentially squandering a valuable resource. Viewlets permit the Faculty member to devote his/her time to the *substantive* aspects of learning and teaching.

8. What is the time commitment for starting to use Viewlets?

Downloading the Viewletbuilder software and learning to use it takes about a half hour. A solid understanding of the entire capabilities requires maybe a two- or three-hour investment of time.

9. Are there costs associated with using them in your courses?

No. The freeware version of ViewletBuilder 2 (which I prefer to ViewletBuilder 3) places an innocuous banner advertisement at the top of the screen as the Viewlet is being displayed. The freeware version of ViewletBuilder 3 brands each screenshot with a not-so-innocuous Carbon watermark.

10. For the more technologically-inclined, can you tell us what a Viewlet really is?

A Viewlet is a Java Applet. Java applets are “natively” understandable to all manner of browsers, which is why a browser does not need a special plug-in to be able to “understand” a Viewlet.

11. Where do you see this technology going in the future, and how might it gain in popularity?

If we look back at the early days of “personal computers”, the hot-button issue that caused them to catch with small business owners and John Q. Citizen on was a very simple idea: the spreadsheet. Whoever decided to bundle the spreadsheet application as a “toss in” with the sale of early Apple computers was a genius. Potential purchasers saw that when they changed one value on the spreadsheet, all the other cells that were linked to that value automatically changed accordingly. What a simple concept -- yet what a profound impact it had on where we are today. How do spreadsheet systems on today’s computers compare to those of the earliest days of “personal computing”? They are very much the same, with some additional bells and whistles added.

Having lived through that revolution, I see Viewlets in the same way. This is a simple, unsophisticated idea that has already had a profound impact on my ability to teach. They may add some bells and whistles down the pike, but it is not clear to me how the current product could be greatly improved. Viewlets have already captivated the interest of a large number of teaching professionals, and so-called “Viewlet farms” (repositories of Viewlets that have been made available for public consumption) are popping up every day. I suspect that we shall see one at GW any day now.