Introduction

Flash and HTML5 (iPad): Recommendations for eLearning Development

E-learning development is changing rapidly. But as mobile devices such as the iPad grow in popularity, they introduce a new round of browser and OS compatibility issues. One such conflict is the lack of Adobe Flash support for the iPad and iPhone, and Apple's use of HTML5, an open source alternative. Both Flash and HTML5 are now widely -- but not universally -- supported. The industry itself is shifting:

1. Adobe is phasing out Flash development for mobile devices, and redirecting its resources to HTML5 development.
2. HTML5 is a relatively new specification, and does not include all of the features of Flash.

To create the most effective solution for each learning audience, eLearning developers must consider objectives carefully before beginning a project, as Flash and HTML5 have different strengths and limitations.

The use of rapid e-learning development tools that output to Flash, saving content developers extraordinary amounts of time and meeting departmental timelines and budgets, gives UTK the flexibility to create diverse and custom content for the university's wide array of learning audiences (both for-credit and non-credit). Applications such as Adobe Captivate and Articulate Studio are both rapid development, e-learning authoring programs that output to Flash. These allow content developers to work with faculty to create engaging, interactive online learning content in a fraction of the time and cost it would normally take a team of Flash developers.

With the advent of mobile technology, namely the iPad introduced over two years ago, many corporations and institutions have strived to take advantage of this new mobile platform with learning content that is not Flash-based. Their reasons for delivery on the iPad vary, but these tend to center around three main factors:

1. An extremely mobile workforce that demands just-in-time training in the field throughout the normal work day;
2. A substantial, enterprise-wide investment in equipping their workforce with the iPad has been made; and,
3. An acceptance of the principle that learning can take place anywhere, anytime and must be available on-demand.

In response to these trends, the major e-learning development tools (like the ones mentioned above) have provided options to publish to iOS device formats in the hopes of capturing the market share of content developers that produce mobile learning content. While there is a
plethora of software companies that claim this feature, their software products are not created equal. Nor do many deliver on their promises to create mobile learning content that has the same functionality as Flash-based content. There are three major reasons for this:

1. HTML5 does not include all of the features of Flash, and it's still an emerging specification.
2. The form factor (primarily the screen size and resolution) but also the user input (keyboard, touch screen, etc.) is different.
3. The environments in which mobile devices are likely to be used (in the car, between meetings, etc.) are more transient in nature.

All of the above requires that learning content for mobile platforms differs substantially from how traditional e-learning modules are created. Mobile learning ("m-learning") content tends to be specifically designed for the device. While the iPad and other tablets are not going to require as much modification as their smaller-screened "cousins", the iPad will require its own set of development protocols that are specifically geared to a mobile device that does not allow Flash-based content, that has a unique form of user input, and is used in more transient learning environments.