

Using LucidChart in an Academic Setting

By Stephen W. Liddle, PhD
Professor, Information Systems Department
Academic Director, Rollins Center for Entrepreneurship & Technology
Marriott School, Brigham Young University

Anyone who does systems analysis, database design, or mobile app development understands the value of having a great diagramming tool. Often, diagrams communicate “big picture” understanding much better than textual descriptions. For example, a class diagram can nicely summarize the concepts in a data model. Some diagrams help us understand and map out intricate details in a way that is easier to understand. I often find myself drawing a state-transition diagram to represent complex logic associated with a mobile user interface. Speaking of mobile interfaces, another great reason for a diagram is to mock up a user interface prototype for an app. If you can show a prototype to your users, they can give great feedback before you write even one line of code. There are many reasons why graphical diagrams are helpful.

But diagrams are sometimes hard to create and maintain. It’s a big temptation to sit down to the computer, open up an IDE, and just start coding without first having done some modeling. As a professor, I see this tendency all the time in my students. They want to get something done, so they get to work. (Sometimes we run into “analysis paralysis” where they spend too much of their time planning and not enough time executing, but in my experience this is a much smaller problem than the tendency to go straight to code.)

Over twenty years ago I began working on how to turn object-oriented conceptual models into implementation models that we could execute directly. My PhD dissertation dealt with this subject, and I currently sit on the advisory board of a company, CARE Technologies, that has brought “executable model” technology to the market. I remain very interested in model-driven technologies, and diagrams are a vital part of that world.

So it is with great interest that I watched [LucidChart \(www.lucidchart.com\)](http://www.lucidchart.com) emerge as an idea developed by one of BYU’s computer science students. LucidChart is a cool new tool that attacks the problem of diagramming in an innovative way. I see four distinct advantages to using LucidChart:

1. Its intuitive approach lets me draw diagrams quickly,
2. It supports collaborative editing of diagrams,
3. Browser-based with storage in the cloud, it’s portable and I don’t have to worry about backing up my diagrams, and
4. They give great support for our academic environment.

When I first saw LucidChart, I was immediately intrigued by the way I could quickly create a diagram by dragging out connecting lines and choosing a target shape from an automatic pop-up menu. Common tasks are easy to perform and repeat. This is a very important aspect to diagramming software. If it’s a pain to draw diagrams, we won’t do it very much. LucidChart takes away a lot of that pain for me. The default layout techniques are good,

making for smooth looking diagrams. (Beauty is in the eye of the beholder, but if you ask my students, I'll bet they confirm to you that I have an eye for what makes a beautiful diagram. I place a lot of emphasis on consistency, conciseness, and clean layouts.)

The Marriott School is a nationally-recognized business school. One of the elements that make our programs great is that we put students in teams and help them learn a lot about group work. Students in the information systems undergraduate core work on semester-long projects that involve quite a bit of graphical diagramming. LucidChart's collaborative editing is a great feature for team-oriented projects. Students can share their diagrams just among team members, and then they can edit those diagrams together (even at the same time if they want). Especially when students are learning some diagramming techniques for the first time, it's helpful for team members to be able to collaborate and raise their collective level of competency together.

I love being able to edit LucidChart diagrams anywhere. A few of the technologies I use on a regular basis include a MacBook Pro, Windows desktops (at home and at work), and tablet devices. With LucidChart, I don't have to worry about installing custom application software on the various platforms. I just open lucidchart.com in my browser, and I can access and edit my diagrams, whether I'm on an iPad or a Windows machine. I can do this virtually anywhere, any time. A couple of years ago I bought in to "the cloud" and got an Android phone and switched to cloud-based mail/calendar/contacts/etc. services. LucidChart is ready for this new cloud-based world.

LucidChart has provided great support for the academic environment. They've given us free licenses to use their software. They answer our questions and even bring people on site to train our students when we ask for that kind of help. It's been a great relationship.

I joined LucidChart's advisory board last year in an uncompensated capacity, and I have to say I'm pleased with how they've listened to my advice. They added UML components so I could use LucidChart in the classes I teach. They implemented Visio import/export (a key feature in my mind). They also made LucidChart into a great prototyping tool for mobile apps. They have iOS templates that make it easy to draw an iPhone or iPad UI and then link "hotspots" together to turn the diagrams into a clickable prototype. It is extremely useful to be able to show an end user a realistic prototype before going through the work of writing Objective-C code.

LucidChart is agile and it keeps getting even better all the time. When people ask me what software I recommend for creating all kinds of diagrams, the answer is easy: LucidChart.

Professor Liddle was awarded a PhD in Computer Science from Brigham Young University in 1995, at which time he joined the Information Systems Department at the Marriott School. He is an expert in ontology-based data extraction, model-driven development, mobile app development, and related areas. He has published dozens of peer-reviewed articles on these and other topics. Liddle serves as academic director of the Rollins Center for Entrepreneurship & Technology, and he mentors many students who are interested in tech entrepreneurship. He also sits (in an unpaid position) on the LucidChart advisory board.