

## ***LawSim: A Framework Template for Multimedia Problem Solving in Law***

**Dr Des Butler**

Assistant Dean, Research

Faculty of Law

Queensland University of Technology

Email: d.butler@qut.edu.au

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In her article "Why angels no longer fear: the use of multi media in law libraries"<sup>1</sup> Jennifer Douglas examined the potential of multimedia to revolutionise the provision of information and other services in law libraries. She also discussed current and future uses of multimedia in law libraries. In the latter category she identified the key areas in which multimedia is likely to be used. These include:

- information tools (such as multimedia catalogues and digests);
- business tools (such as multimedia packages promoting law libraries or for the business development of library clients); and
- educational tools (including multimedia training packages concerning the use of library resources and facilities and training packages targeting students or junior lawyers in areas of legal practice).

The *LawSim* project undertaken by a team of academics from the Faculty of Law, Queensland University of Technology in conjunction with the Teaching and Learning Support Services (TALSS) (Development) department at the same university is an example of multimedia in this third manifestation. This project was supported by funding obtained from the Federal Government's Quality Round – Teaching, and sought to address common problems associated with the use of technology in teaching in university, particularly problems associated with the production of interactive multimedia materials.<sup>2</sup>

These problems include the following:

- often the development of multimedia materials demands an excessive and disproportionate time commitment from academic and other staff such as specialist computer designers and programmers;
- such projects commonly require high developmental costs, which are often dependent upon obtaining specialised funding;
- there is perhaps a natural reluctance to utilise materials already developed by other institutions, which may not be suited to the particular needs of the relevant course being taught. It is common experience that academics often talk in terms of developing educational software that they intend *selling*. Less often does anyone talk in terms of the educational software they intend *buying*;

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<sup>1</sup> Douglas, J. "Why angels no longer fear: the use of multi media in law libraries" *Australian Law Librarian* 5 (3) October 1997 pp 195-207.

<sup>2</sup> The author would like to acknowledge the extensive work done on the *LawSim* project by a large number of academics in the Faculty of Law, QUT and by developmental staff from TALSS, QUT, in particular the work done by Gordon Joughin and David Green.

- technology has often been seen as an expensive and luxurious add-on in the teaching and learning strategy of subjects, rather than occupying a more essential and integrated role; and
- many applications in the past have not necessarily been based on explicit understanding of the way in which students learn

The *LawSim* project attempted to address these problems in a twofold approach:

- (1) the creation of a “template” computer program, designed to enable lecturers to develop and input their own materials and to thereby produce their own computer based applications in law, without the expense of recourse to specialist computer designers and programmers; and
- (2) the development of a framework for methods of integrating computer based applications into the design of subject curriculum.

In her article, Jennifer Douglas referred to the creation of multimedia in terms of two steps: firstly the creation or collection of relevant materials, and secondly the programming or packaging of those materials into the form of multimedia software. This still accurately reflects the steps in producing multimedia materials using *LawSim*. The advance made by *LawSim*, however, may be thought of in terms of the extent of the lecturer’s involvement. Traditional methods have seen only the first step of creation or collection of relevant materials being performed by academics, before those materials are placed in the hands of specialist designers and programmers to be “put together”. The *LawSim* template involves academics in both the creation and collection of material and the packaging of that material. In short, the *LawSim* template operates as a computer program that removes the need for computer designers and programmers in the production of multimedia software. In so doing, *LawSim* addresses the problems associated with high developmental costs and transfers the ability to produce quality computer based education from computer specialists to lecturer’s desktops.

### ***LAWSIM APPLICATIONS: WHAT THE STUDENT SEES***

The *LawSim* template enables lecturers to create realistic settings or environments within which students can act on the basis of what they have already learnt about the law through other methods such as lectures, study guides, textbook, and discussions within tutorials. For example, the six applications produced using the *LawSim* template for the first year undergraduate unit *Contracts* at the Faculty of Law, QUT, centre on the various contractual dealings of the fictional Whiskey Bravo International Airport

*LawSim* builds on the interaction between three components: problems, the information or resources needed to answer those problems, and the research tools that may be used in the process of answering those problems. *LawSim* has the ability to provide feedback to enable students to modify their understanding and to adjust their actions, which may then be followed up by discussion and reflection by other methods such as discussion in a tutorial setting.<sup>3</sup>

<sup>3</sup> This methodology reflects the steps identified in, for example, Laurillard’s “conversational framework” for learning developed in Laurillard, Diana *Rethinking University Teaching: a Framework for the Effective Use of Educational Technology*, Routledge, 1993 and subsequent works.

The student navigates through a number of preliminary screens before reaching the main work space. There is, among other things, an optional multiple choice pre-test so that students can quickly determine for themselves whether they know and understand the legal principles to be applied in the main problem or whether they should first refresh themselves on the relevant law from texts or other sources

Once the pre-test has been completed, the student encounters a “problem set” or list of problems. The nature and complexity of these problems is entirely at the discretion of the lecturer who produces the *LawSim* application. They may be of a doctrinal nature, involve critical analysis, or be policy or reform based. They may require the preparation of an advice, letter or other communication. They may relate to substantive law or process, including research methodology. *LawSim* has been designed to have the capacity to accommodate as wide a range of uses as possible within the confines of a common metaphor, a simulated office

Problems within the problem set may be accompanied by hints on how to go about producing an answer. Further, once an attempt has been made, feedback in the form of either a model answer or constructive guidance in relation to the content and/or structure of a “good” response may be provided

The simulated office represents the student's main work space, and is encountered immediately after the student moves on from the problem set. The student is presented with the perspective of being situated behind a desk. The desk features a number of potential sites for obtaining information relevant to the problem, in the form of a telephone, an in-tray, a newspaper, a client's file, and a television/radio combination which may be used for viewing video or for listening to audio. Clicking on any one of these items activates a screen showing a menu of those resources loaded by the lecturer under that item. For example, the lecturer may have created a number of fictional newspaper articles that convey certain information needed to assist in answering a problem. Clicking on the newspaper shown on the desk would open a menu with a list of descriptions of the various articles. Clicking on one of these descriptions would display that particular article, complete with newspaper masthead and headline, perhaps accompanied by a photograph or other graphic

There are two additional resource sites. The student may click on a button that transports him or her to a simulated library. Like the office, the library comprises a number of items under which the lecturer may load resources: two rows of books, a computer and a second television/radio combination. In a legal context, the top row may be used for loading the text of primary materials such as cases and statutes, while the second row may be useful for loading the text of secondary materials, such as texts, articles, study guides and the like. Clicking on the computer may activate the Web browser installed on the computer, with up to ten pre-loaded URLs, or may launch an external computer program such as a library's CD-ROM collection or a Powerpoint viewer. Clicking on the television/radio combination again enables the student to view video or listen to audio: in this case, though, the video/audio would be more related to the law than the facts.

The third site is accessed by clicking the ‘comments’ button. The *LawSim* template offers a gallery of twelve photo portraits, representing the twelve permutations of sex, age (young adult and old adult) and race (white, black and Asian), from which up to three may be

featured in an application. This site enables lecturers to present different perspectives on the facts and/or the law in order to convey to students the notion that facts and law are rarely uni-dimensional. For example, the portrait of an elderly male Aborigine might be used to convey a different perspective on a native title problem.

At any time the student may access a range of research tools which may provide assistance in compiling the answer to the problem being addressed. These tools include guides on reading and summarising cases, writing advices, writing letters of advice, critical analysis, and legal research including electronic research on the Internet.

*LawSim* does not include a word processor of its own. However, by clicking on the *Write* button at any stage in the program, the *LawSim* application automatically scans the computer's hard drive and opens the student's word processor. With the two programs open, the student can alternate between them by use of Window's Alt-Tab function. From the "problem set" screen, the student is able to copy the problems into the Window's clipboard and paste them into the word processor for ease of reference. Similarly, the student may copy the text of resources that have been located into the office, library or comments sections of the word processor before developing an answer.

The student therefore uses *LawSim* to become apprised of the problem or problems to be addressed, to collect the necessary resources and to obtain guidance if necessary from the tools, hints and feedback, but the actual development of the answer or answers is done in the student's word processor. Saving work in progress is merely a matter of saving a word processor document to disk in the usual way.

### ***THE LAWSIM TEMPLATE: WHAT THE LECTURER SEES***

Lecturers use the *LawSim* template to input content they have developed or collected to create applications for inclusion in a subject's teaching and learning program.

The *LawSim* template was designed utilising concepts that would be familiar to users of Powerpoint and similar software. The template may be used in one of two ways: sequentially, ensuring that each step in the creation of an application is taken in turn, or in a more unregulated manner, the lecturer working on that part of the application that he or she desires at the time. The template requires the lecturer to at least create an overview, a problem set and some resources for the simulated office. The overview may set out the objectives of the application. It may also provide details such as how the application is integrated into the curriculum and a schedule for completion of the application. The lecturer may also include hints and/or feedback for each problem, resources for the simulated library, perspectives on the facts and/or law and the pre-test.

Materials may be input into the template in a number of ways. The quickest way for materials to be added is where the material is already prepared using a word processor. Alternatively, material can be directly typed into the template or imported by specifying the relevant file (with or without html commands). Direct typing is best used for editing of materials, while importing a file is suited to long documents.

The template cannot be used to produce video or audio files. Instead, video (.avi files) and audio (.wav files) created using appropriate software (such as Creative Studio software) may be imported into the program.

The template is accompanied by a detailed manual, which has also been designed for ease of reference and utilises accessible language.

Naturally, use of the template increases with familiarity. Experience at QUT has shown, however, that by developing materials using a word processor and then inputting that material into the template (mostly by cutting and pasting), the time taken for the creation of a multi-media application is in the order of 25-30 hours

### ***INTEGRATING A LAWSIM APPLICATION INTO A SUBJECT'S CURRICULUM***

An underlying assumption of *LawSim* is that the applications produced will be carefully integrated into the curriculum of the subject concerned. Advice on methods of integration is set out in the manual. A particularly important consideration from a pedagogical point of view is whether there is an overt link between students' actions (such as attempts at a *LawSim* application) and the assessment in the particular subject

The first year undergraduate law unit, Contracts, offered by the Faculty of Law at QUT in 1998 provides an example of the integration of a *LawSim* application into the curriculum of a subject. In this unit there are six modules or applications that have been produced using the *LawSim* template and which cover material from across the entire full year subject. Three modules are to be attempted by students each semester. Time has been notionally allocated from the lecture program for students to attempt each module. The modules are available in computer laboratories throughout the University as well as on CD-ROM which may be used to install the first three modules on to students' home computers (the remaining three modules are to be made available on the Faculty's network server, as well as in the laboratories). Students may therefore utilise the time notionally allocated to them, but may instead prefer to attempt the applications at a time of their own convenience. Attempts to answer problems in each module are reviewed as part of the seminar program, in specially dedicated classes at which each student's quality of participation is to be assessed. In addition, material covered in the modules may be examined in end of semester examinations

### ***LAWSIM: SOME IMPLICATIONS***

*LawSim* offers some important advantages for law libraries. There is an opportunity to provide for focused research on the Internet and library CD-ROMs. Perhaps more exciting in times of financial restraint and high demand on limited resources is the ability to load the full text or excerpts of relevant library resources into the simulated library. This may be particularly attractive when providing for distance students, who might otherwise have difficulty accessing such materials.

Naturally, such strategies will not present problems where the material has been created internally, such as an article written by the lecturer or a study guide prepared for the course. However, as Jennifer Douglas discussed in her article, an important limitation on the use of multimedia is the need to obtain copyright permission for the use of third party content.<sup>4</sup> *LawSim* is no different. Copyright will be a pressing issue not only for the text of materials loaded into the simulated office, but also materials such as audio or video and graphics (such as clipart) produced by third parties.

<sup>4</sup> Douglas, J. "Why angels no longer fear: the use of multi media in law libraries" *Australian Law Librarian* 5 (3) October 1997 pp 195 – 207 at p 202



A further practical limitation of multimedia, including *LawSim*, concerns delivery. If the application is designed to be able to be used by students on their home computers, it cannot require the most up-to-date software and/or hardware. *LawSim*, for example, is designed for relatively conservative minimum requirements: a 486 DX2-66, a twin spin CD-ROM drive, 16 MB of RAM, a 16 bit sound card and Windows 3.1 or Windows 95/NT.

Nevertheless, current technology is such that audio and, in particular, video files are still computer disk space hungry. As a consequence, there is a natural limit to the length of audio and especially video that may be usefully incorporated into multimedia packages which is unconnected with the capabilities of the *LawSim* template. For example, a 50 second .wav audio file may use up to 800kb of space. This is not a particular concern when the sole means of delivery is by CD-ROM; indeed CD-ROMs have an acknowledged capacity for delivery of multimedia. However, it becomes an important consideration in the design of applications when it is intended to allow students the flexibility and convenience of downloading applications from a Faculty network server or the Internet. In the case of the former, audio and video files presently need to be limited to the capacity of a floppy disk. In the long run, though, advancing digitalisation technology should overcome this practical concern.

## **CONCLUSION**

*LawSim* is a multimedia template that offers the ability to explore materials and to develop generic skills in a manner not previously possible in traditional methods of teaching and learning in law schools. These include giving students the experience of sifting through a large number of legal documents and other material, sifting through different resources in order to distinguish relevant from irrelevant facts, collating and organising facts and legal research including electronic research, all in the context of realistic and dynamic settings. Students may also be exposed to different perspectives on facts or law.

*LawSim* also offers the potential to examine areas in varying fields from substantive law subjects such as *Contracts* through to the methodology of legal research. The problems raised in a *LawSim* application are entirely at the lecturer's discretion and are only limited by the metaphor of a simulated office and the lecturer's imagination. They may be of a doctrinal, policy, reform, methodical or other nature. It is useful to note that the office does not need to be a lawyer's office. The resources in the simulated office are no different from those that might be expected in an office of any type, whether it be of a government worker, doctor, social worker, business person or other type of office worker.

Subject to the ever present issue of copyright, *LawSim* offers the capacity to deliver the text or excerpts from books, articles and other materials, some of which may be in short supply or high demand in libraries, in a flexible, inclusive manner to students, including distance students. It may also provide a realistic setting for legal research, including electronic research on the Internet and library CD-ROMs. It therefore presents tangible benefits for law libraries and for teaching and learning in law curricula. At the same time *Law Sim* overcomes the obstacles normally associated with the production of multimedia. These obstacles include the commitment of inordinate or excessive time and financial resources, and the desire for multimedia materials tailored to individual courses. It is an integrated component of a subject's curriculum based on an understanding of the way students learn.