MONASH University

FIT2012
Digital media authoring

Unit guide

Semester 2, 2008

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FIT2012 Digital media authoring - Semester 2 , 2008

Unit leader :

Cheryl Howard

Lecturer(s) :

Berwick

- Cheryl Howard

Caulfield

- Cheryl Howard
- William Lay

Tutors(s) :

Berwick

- Cheryl Howard

Caulfield

- Cheryl Howard
- William Lay

Introduction

Welcome to FIT2012 Digital Media Authoring for Semester 2, 2008. This 6 point unit is part of the Multimedia Applications major of the Bachelor of Information Technology and Systems degree. The unit has been designed to provide you with an understanding of the principles and practices of programming within a multimedia authoring environment. It explores developing applications using the current version of Flash and ActionScript 3.0.

Unit synopsis

The unit will develop further the basic concepts of information technology and the hardware and software tools and will focus mainly on specialist tools which are used in multimedia systems. In particular attention will be given to the tools available to support linear and non-linear methods of integrating sound and video; the use of multimedia authoring tools to create and edit training and other interactive multimedia presentations; tools and programming techniques for multimedia interactivity; design techniques for interactive multimedia; and technologies for the web and CD-Rom.

Learning outcomes

Knowledge and Understanding

At the completion of this unit students will have a theoretical and conceptual understanding of:

- information technology and the software tools as they relate to (and are used in) multimedia systems;
- the Adobe Flash CS3 authoring environment for CD-ROM and web based systems development;
- codecs and compression techniques associated with digital video, images and sound and the appropriate application of these for use in application development;
- the formal process undertaken for preparing and documenting the various development stages of a multimedia system;
- how to achieve a range of special effects which are commonly required for advanced interactive design in multimedia systems;
- fundamental programming techniques and how to carry this knowledge across multiple languages.

Attitudes, Values and Beliefs

At the completion of this unit students will have developed attitudes that enable them to:

- outline strengths and weaknesses of information technology in the context of the development and use of multimedia systems;
- make informed decisions on the most appropriate blend of tools and technologies to support a given multimedia system requirement;
- formulate constructive criticism within the construct of critical analysis.

Practical Skills

At the completion of this unit students will have the skills to:

- apply advanced interactive design techniques to a multimedia system using time/frame based authoring environments;
- use a blend of industry standard multimedia tools and products.
- write code to assist in advanced system interaction with the programming language ActionScript 3.0;
- further enhance and refine user interface and navigational design and creativity skills in multimedia systems;

- specify an appropriate toolset for developing and supporting advanced features/functionality in a multimedia system.

Relationships, Communication and TeamWork

At the completion of this unit students will have developed the teamwork skills needed to:

- build confidence in formal presentation techniques presenting personal ideas, research concepts and developmental progress;
- discuss and share developmental processes and techniques within an informal populated environment.

Workload

Broadly the time required to complete this topic is shown in the following table, but note this is just a rough indication. You may need to spend more time on some activities depending on your background and knowledge. In addition, you need to spend extra time on assignments and review.

Attending lectures and reviewing notes	3 hours
Doing activities in lab classes	2 hours
Readings	3 hours
Contact (e-mail, consultation, etc.)	30 minutes
Total	8 hours 30 minutes

Unit relationships

Prerequisites

Before attempting this unit you must have satisfactorily completed FIT1012, or equivalent. Students should have a basic knowledge of Multimedia fundamentals such as appropriate file formats, file sizes, basic multimedia authoring principles, digital imaging skills and an adequate skill level in several fundamental multimedia applications.

Relationships

FIT2012 Digital Media Authoring is a core unit in the Bachelor of Information Technology and Systems - Major in Multimedia. It is a prerequisite for FIT2016 Human Computer Interaction for Multimedia, FIT3039 Studio 1, FIT3033 Principles of Educational Multimedia.

Continuous improvement

Monash is committed to ‘Excellence in education' and strives for the highest possible quality in teaching and learning. To monitor how successful we are in providing quality teaching and learning Monash regularly seeks feedback from students, employers and staff. Two of the formal ways that you are invited to provide feedback are through Unit Evaluations and through Monquest Teaching Evaluations.

One of the key formal ways students have to provide feedback is through Unit Evaluation Surveys. It is Monash policy for every unit offered to be evaluated each year. Students are strongly encouraged to complete the surveys as they are an important avenue for students to "have their say". The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

Student Evaluations

The Faculty of IT administers the Unit Evaluation surveys online through the my.monash portal, although for some smaller classes there may be alternative evaluations conducted in class.

If you wish to view how previous students rated this unit, please go to
http://www.monash.edu.au/unit-evaluation-reports/

Over the past few years the Faculty of Information Technology has made a number of improvements to its courses as a result of unit evaluation feedback. Some of these include systematic analysis and planning of unit improvements, and consistent assignment return guidelines.

Monquest Teaching Evaluation surveys may be used by some of your academic staff this semester. They are administered by the Centre for Higher Education Quality (CHEQ) and may be completed in class with a facilitator or on-line through the my.monash portal. The data provided to lecturers is completely anonymous.
Monquest surveys provide academic staff with evidence of the effectiveness of their teaching and identify areas for improvement. Individual Monquest reports are confidential, however, you can see the summary results of Monquest evaluations for 2006 at http://www.adm.monash.edu.au/cheq/evaluations/monquest/profiles/index.html

Unit staff - contact details

Unit leader

Ms Cheryl Howard
Lecturer
Phone +61 3 990 47158

Lecturer(s) :

Ms Cheryl Howard
Lecturer
Phone +61 3 990 47158
Contact hours : Tuesday 1-2pm & 4-5pm

Mr William Lay
Contact hours : Monday 11-12noon; Tuesday 1-2pm

Tutor(s) :

Ms Cheryl Howard
Lecturer
Phone +61 3 990 47158
Mr William Lay

Teaching and learning method

This unit will be delivered via a 2 hour lecture and a 2 hour laboratory class each week.

Lectures will be used to present and explain programming principles and practices within the context of the authoring environment of Flash.

Laboratories will be used for practical experience in the development, coding, testing and debugging of the functions specific to the authoring environment.

Communication, participation and feedback

Monash aims to provide a learning environment in which students receive a range of ongoing feedback throughout their studies. You will receive feedback on your work and progress in this unit. This may take the form of group feedback, individual feedback, peer feedback, self-comparison, verbal and written feedback, discussions (on line and in class) as well as more formal feedback related to assignment marks and grades. You are encouraged to draw on a variety of feedback to enhance your learning.

It is essential that you take action immediately if you realise that you have a problem that is affecting your study. Semesters are short, so we can help you best if you let us know as soon as problems arise. Regardless of whether the problem is related directly to your progress in the unit, if it is likely to interfere with your progress you should discuss it with your lecturer or a Community Service counsellor as soon as possible.

Unit Schedule

Week	Topic	Study guide	References/Readings	Key dates
1	Overview of the Unit, Overview of Flash Basics, Game Development & Design Principles	Assignment Overview & Documentation, Drawing tools and techniques, Appropriate organisation of timeline	Green: 1 and 2	
2	Flash Symbols, ActionScript Basics, Navigation & Events	Applying interactive affordance in Flash, Navigation working with buttons, Drop Menus, MovieClip behaviour and hierarchy	Green: 3 and 4; Shupe: 1, 2 & 5	
3	Using Flash Components, Input and Form Elements	Create a basic component-based form, Accept input from components and store in variable	Green: 9	Submit completed Game Specification Document
4	Implementing Externally Loaded Content (TXT and XML	Using externally loaded SWF content, Load data from text and XML	Green: 11; Shupe 14	

	files), Data Tracking			
5	Flash Animation Basics	Animation in Flash Using Tweening Techniques, Motion Guides and Masks	Green: 6 & 7	Submit Navigation / Graphic Game Prototype
6	Scripted Animation, MovieClip objects	Linking objects to MovieClips	Shupe: 4 & 8	
7	Flash object oriented design, Introduction to custom classes	Planning and creating an external class, Public/private methods and variables	Shupe: 3 & 6	
8	Exploring keyboard events, Using Movie Clips to Change States	Capturing keyboard events, Moving objects with the keyboard, collision detection	Shupe: 3 & 10	
9	Advanced ActionScript Techniques, Arrays, Math functions, Strings and Saving Data	Using arrays, random numbers, text formatting and saving data in context by building simple applications	Green: 6; Shupe: 4, 6 & 10	
10	Using Sound Objects and Video in Flash	Externally Loaded Streaming Content (background music and effects), FLV video with Flash Video components	Green: 5 & 8; Shupe 11 & 12	
11	Optimising Flash for Web and CD Publishing	Programming Checklist, Debugging and Tweaking Game Code		
Mid semester break				
12	Publishing Flash Movies - CSS, HTML	Implementing a variety of web publishing techniques	Green 4 & 10; Shupe 13	Submit completed Game Development Project
13	Revision	Student Game Demonstrations		

Unit Resources

Prescribed text(s) and readings

Foundation Flash CS3 for Designers
By Tom Green, David Stiller
Friends of Ed (2007)
ISBN-10: 1-59059-861-X
ISBN-13: 978-1-59059-861-0

Learning ActionScript 3.0 - A Beginner's Guide
By Rich Shupe with Zevan Rosser
O'Reilly (2008)
ISBN-10: 0-596-52787-X
ISBN-13: 978-0-596-52787-7

See also: "Recommended Reading" below for a list of recommended references.

Text books are available from the Monash University Book Shops. Availability from other suppliers cannot be assured. The Bookshop orders texts in specifically for this unit. You are advised to purchase your text book early.

Recommended text(s) and readings

Required software and/or hardware

All software required for use in this unit can be accessed from allocated campus laboraties/tutorial rooms.

The software used in this unit consists of:

- Adobe Flash CS3 Professional
- Adobe Photoshop CS3
- Adobe Illustrator CS3

30 Day Trial/Evaluation versions of the named software can be dowloaded for personal use if neccessary from the following websites:

- http://www.adobe.com/

Equipment and consumables required or provided

Students may use the facilities available in the computing labs. Information about computer use for students is available from the ITS Student Resource Guide in the Monash University Handbook. You will need to allocate up to 8 hours per week for use of a computer, including time for newsgroups/discussion groups.

Study resources

Study resources we will provide for your study are:

available on the FIT2012 web site on MUSO. It will host lecture slides, weekly tutorial requirements and assignment specifications. In addition, supplementary resources may also be posted.

Library access

The Monash University Library site contains details about borrowing rights and catalogue searching. To learn more about the library and the various resources available, please go to http://www.lib.monash.edu.au. Be sure to obtain a copy of the Library Guide, and if necessary, the instructions for remote access from the library website.

Monash University Studies Online (MUSO)

All unit and lecture materials are available through MUSO (Monash University Studies Online). Blackboard is the primary application used to deliver your unit resources. Some units will be piloted in Moodle. If your unit is piloted in Moodle, you will see a link from your Blackboard unit to Moodle (http://moodle.monash.edu.au) and can bookmark this link to access directly. In Moodle, from the Faculty of Information Technology category, click on the link for your unit.

You can access MUSO and Blackboard via the portal: http://my.monash.edu.au

Click on the Study and enrolment tab, then Blackboard under the MUSO learning systems.

In order for your Blackboard unit(s) to function correctly, your computer needs to be correctly configured.

For example:

- Blackboard supported browser
- Supported Java runtime environment

For more information, please visit: http://www.monash.edu.au/muso/support/students/downloadables-student.html

You can contact the MUSO Support by: Phone: (+61 3) 9903 1268

For further contact information including operational hours, please visit:
http://www.monash.edu.au/muso/support/students/contact.html

Further information can be obtained from the MUSO support site:
http://www.monash.edu.au/muso/support/index.html

Assessment

Unit assessment policy

The unit is assessed with one major assignment with 3 project milestones (60%) and a three hour closed book examination (40%). To pass the unit you must:

- achieve no less than 40% of the possible marks in the exam
- achieve no less than 40% of the possible total marks for the assignment
- achieve no less than 50% of possible marks

Assignment tasks

• Assignment Task

Title : Game Development Project

Description :

The practical project will be based on the Flash CS3 authoring environment covered during the semester.

From the following game scenarios, select one to develop for your major assessment task. It is important that you select carefully because the Game Design Specifications will be required by Week 3 and a complete navigational/graphical prototype will be required by Week 5. This is to ensure that you have an appropriate amount of time to implement the programming aspects of the game, and to assist in time management of the project.

♦Variation on Yahtzee / Dice Game
♦ChooseYour Own Adventure (CYOA) Game
♦Platform Arcade Game

The **Game Design Specification** documentation is designed to outline and organise the development process of the project. Appropriate headings are provided as a guide to what you should include in the design specifications for your selected game project. Be aware that part of your final assessment will include how well you develop your project in accordance to what you stipulate in this document. In other words, a small but completed project will score very well as opposed to a large incomplete one!

The **Navigation/GUI Prototype** will demonstrate how you have structured your game and show the majority of your interface design. The game components DO NOT have to function for this prototype as dummy data and/or game components can be used to show the overall look-and-feel if the game. The prototype should include a clearly defined internal structure on the time line (as demonstrated in labs), clearly show the main screen elementsof the game, and an example of each major screen of the game. [NOTE: the individual screen elements are only there to show their position on the screen and DO NOT have to function at this stage. All that is required is acomplete screen layout with appropriate design suited to the game you are developing.]

The final part of this assessment is the submission of a **fully functional game**, developed according to the game specification documents submitted in Week 3. There are 5 common components that must also be successfully integrated into the final game. These will also be covered in the weekly lab tasks conducted throughout the semester. These are the basic functions or features required to make the game have at least an elementary level of interaction. Additionally, you must successfully integrate the 3 project enhancements as described underthe individual game scenarios. These enhancements cover a range of graphic,animation, audio and programming options to allow students to target theirstrengths and apply

them accordingly.

Weekly tasks will be available to download from MUSO. It is expected that students will download the materials relevant to each week's activity. Working through each activity will give students an understanding of various techniques and their suggested application, however it will be up the each individual student to determine how to best implement these techniques to best suit their needs.

Weighting : 60%

Criteria for assessment :

The project will be worth 60% of the final grade and will be marked out of 100. The marks for this project will be assigned as follows:

Game Design (40)

30 Game DesignSpecification Document to be submitted by **Week3**. For more detailed information see the Game Design Specification sectionbelow.

10 Navigation/GraphicPrototype to be submitted by **Week 5**.This will demonstrate how you have structured your game and show the majorityof your interface design. The game components DO NOT have to function for thisprototype as dummy data and/or game components can be used to show the overalllook-and-feel if the game.

Game Implementation (60)

15 Successful integration of the 5 common project requirements (5 requirements x 3 marks each). These will also be covered in the weekly lab tasks conducted throughout the semester.These are the basic functions or features required to make the game have at least an elementary level of interaction.

30 Successful integration of the 3 project enhancements in the final project (3 enhancements x 10 marks each). These will also be linked to the weekly lab tasks. These enhancements cover a range of graphic, animation, audio and programming options to allow students to target their strengths and apply them accordingly. The criteria for successful implementation is the enhancement working without error, logical and efficient coding with all extraneous code eliminated, appropriate application of good programming practices (ie: use of commenting, naming conventions,variables, properties, re-usability, etc.).

15 Fully functional game,including the integration of the 5 common and 3 specific requirements to be submitted by **Week 12**. The criteria for this component will include:

- Interface design and brand development including the overalllook-and-feel of the game's graphics/interface, consistency of layout anddesign, and presentation and readability of content (5).
- The implementation of Flash features including animation,appropriate use of different symbol types, application of different types ofmedia (image/audio), and Flash components (5).
- The final product is fully functional and works without error. Itemspresented within the game must also function correctly. Internal and externalassets must be organised in a logical structure, with appropriate navigationstructures implemented (5).

Due date : By 4pm Wednesday of the specified week

Examinations

- **Examination**

  Weighting : 40%

  Length : 3 hours

  Type (open/closed book) : closed book

  Remarks (optional - leave blank for none) :

  The end-of-unit examination will be a test of knowledge on all aspects of the unit from conceptual theories, practical development, interactive design principals and practical developmental tools and techniques. The questions will be drawn from a variety of sources including the textbook, lectures and lab notes.

Assignment submission

Major project milestones will be submitted by 4pm Wednesday of the week that they are due to the designated submission box on a CD-ROM and with the appropriate paper Asignment Cover Sheet correctly filled out and attached.

These are available from the Berwick and Caulfield School of Information Technology offices in Building 903 or on level 6 of building H respectively. Further instructions will be provided with the assignment specifications.

University and Faculty policy on assessment

Due dates and extensions

The due dates for the submission of assignments are given in the previous section. Please make every effort to submit work by the due dates. It is your responsibility to structure your study program around assignment deadlines, family, work and other commitments. Factors such as normal work pressures, vacations, etc. are seldom regarded as appropriate reasons for granting extensions. Students are advised to NOT assume that granting of an extension is a matter of course.

Requests for extensions must be made to the unit lecturer at your campus at least two days before the due date. You will be asked to forward original medical certificates in cases of illness, and may be asked to provide other forms of documentation where necessary. A copy of the email or other written communication of an extension must be attached to the assignment submission.

Late assignment

Assignments received after the due date will be subject to a penalty of 10% per day (including weekend days).

Assignments received later than one week after the due date will not be accepted for assessment unless prior (alternate) arrangements have been made with the unit Lecturer due to special circumstances.

Return dates

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.

Assessment for the unit as a whole is in accordance with the provisions of the Monash University Education Policy at http://www.policy.monash.edu/policy-bank/academic/education/assessment/

We will aim to have assignment results made available to you within two weeks after assignment receipt.

Plagiarism, cheating and collusion

Plagiarism and cheating are regarded as very serious offences. In cases where cheating has been confirmed, students have been severely penalised, from losing all marks for an assignment, to facing disciplinary action at the Faculty level. While we would wish that all our students adhere to sound ethical conduct and honesty, I will ask you to acquaint yourself with Student Rights and Responsibilities (http://www.infotech.monash.edu.au/about/committees-groups/facboard/policies/studrights.html) and the Faculty regulations that apply to students detected cheating as these will be applied in all detected cases.

In this University, cheating means seeking to obtain an unfair advantage in any examination or any other written or practical work to be submitted or completed by a student for assessment. It includes the use, or attempted use, of any means to gain an unfair advantage for any assessable work in the unit, where the means is contrary to the instructions for such work.

When you submit an individual assessment item, such as a program, a report, an essay, assignment or other piece of work, under your name you are understood to be stating that this is your own work. If a submission is identical with, or similar to, someone else's work, an assumption of cheating may arise. If you are planning on working with another student, it is acceptable to undertake research together, and discuss problems, but it is not acceptable to jointly develop or share solutions unless this is specified by your lecturer.

Intentionally providing students with your solutions to assignments is classified as "assisting to cheat" and students who do this may be subject to disciplinary action. You should take reasonable care that your solution is not accidentally or deliberately obtained by other students. For example, do not leave copies of your work in progress on the hard drives of shared computers, and do not show your work to other students. If you believe this may have happened, please be sure to contact your lecturer as soon as possible.

Cheating also includes taking into an examination any material contrary to the regulations, including any bilingual dictionary, whether or not with the intention of using it to obtain an advantage.

Plagiarism involves the false representation of another person's ideas, or findings, as your own by either copying material or paraphrasing without citing sources. It is both professional and ethical to reference clearly the ideas and information that you have used from another writer. If the source is not identified, then you have plagiarised work of the other author. Plagiarism is a form of dishonesty that is insulting to the reader and grossly unfair to your student colleagues.

Register of counselling about plagiarism

The university requires faculties to keep a simple and confidential register to record counselling to students about plagiarism (e.g. warnings). The register is accessible to Associate Deans Teaching (or nominees) and, where requested, students concerned have access to their own details in the register. The register is to serve as a record of counselling about the nature of plagiarism, not as a record of allegations; and no provision of appeals in relation to the register is necessary or applicable.

Non-discriminatory language

The Faculty of Information Technology is committed to the use of non-discriminatory language in all forms of communication. Discriminatory language is that which refers in abusive terms to gender, race, age, sexual orientation, citizenship or nationality, ethnic or language background, physical or mental ability, or political or religious views, or which stereotypes groups in an adverse manner. This is not meant to preclude or inhibit legitimate academic debate on any issue; however, the language used in such debate should be non-discriminatory and sensitive to these matters. It is important to avoid the use of discriminatory language in your communications and written work. The most common form of discriminatory language in academic work tends to be in the area of gender inclusiveness. You are, therefore, requested to check for this and to ensure your work and communications are non-discriminatory in all respects.

Students with disabilities

Students with disabilities that may disadvantage them in assessment should seek advice from one of the following before completing assessment tasks and examinations:

- Faculty of Information Technology Student Service staff, and / or
- your Unit Coordinator, or
- Disabilities Liaison Unit

Deferred assessment and special consideration

Deferred assessment (not to be confused with an extension for submission of an assignment) may be granted in cases of extenuating personal circumstances such as serious personal illness or bereavement. Information and forms for Special Consideration and deferred assessment applications are available at http://www.monash.edu.au/exams/special-consideration.html. Contact the Faculty's Student Services staff at your campus for further information and advice.