### Project Title

**Sound for Games/Research**

**Tutors / Assessors**

Shaun O’Shea
James Robertson (Specialist)

### Unit No: 73 L/502/5776

**Unit number & Unit Title**

**Unit Title:**
Sound for Computer Games

**Points:** 10

**Grading criteria addressed by Project**

<table>
<thead>
<tr>
<th>P1</th>
<th>P2</th>
<th>P3</th>
<th>P4</th>
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<tbody>
<tr>
<td>M1</td>
<td>M2</td>
<td>M3</td>
<td>M4</td>
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| D1 | D2 | D3 | D4 |

### Date set

**21/11/11**

**Duration of Project**

5 Weeks

**Submission date**

09/01/12

### Aims

The aim of this unit is to introduce learners to how sound is designed and produced for games. Learners will investigate the use of sound and music in games and explore sound production methods. Learners will design and produce appropriate original sounds for a game and will integrate these sounds and stock audio content into a scene of a game.

### Learning outcomes

**On completion of this unit a learner should:**

- Understand the use of sound and music in games
- Understand methods and principles of sound design and production
- Be able to create sound assets for a computer game following industry practice
- Be able to apply sound assets to a computer game following industry practice

### Project overview

The games industry can be a very exciting and dynamic place for musicians and sound designers. Video games have become a new way of telling stories and game audio is fundamental to this. Game audio is there to drive the action. Through sound and music, a game can completely immerse a player in another universe or reality. The creative freedom to manipulate moods and environments is limited only by the technical capabilities of the machine and a composer’s imagination. While being creatively liberating, interactive game audio can also be technically demanding. Designing audio and composing music for games can often be much more challenging than designing for motion pictures.

Games technology changes constantly and with every new development each new game title tries to outperform the previous one. As technology improves, every game title attempts to implement new ways of making games faster, bigger and louder than before; this means constantly adapting to new techniques of producing sound and music for games. The soundtrack for games is becoming like that of feature film music — developers are using
techniques where characters have personal themes and signature instruments. Game world locations and destinations with highly recognisable ambient and musical settings will begin to develop and expand, including the implementation and development of interactive (true adaptive) music to next-generation games.

More processor memory is being devoted for sound and music in video games, allowing sound designers to match the richness of the visuals and make a more epic sound experience for the player. A future of game audio lies in the addition of Foley. The introduction of Foley to game audio creates a more complex sound experience which captures increasingly realistic human sounds. A character moving around in a first person shooter game has the illusion reinforced by having the armour jingling, the gun clinking, the sound of boots on the hard crunching snow and the use of music to create mood and provide audio cues.

Brief

Throughout this unit you will investigate the use of sound for games. The criteria for this unit will be met by researching and producing an essay on the use of sound in a game. You will produce audio game content using audio recorders and audio sequencing software; this must be backed up by a workbook documenting your processes. Finally, you will evaluate your audio game content and processes.

Care should be taken with the following areas:

Using appropriate technical, legal, technological and theoretical terminology in your discussion of sound for games.

Documenting your input as an individual into the team exercise thoroughly. Which were your ideas? Which were your recordings? etc.

Maintain an accurate log of recordings and file names created. Always double check that recordings have worked correctly and the file you’ve created plays properly, etc.

Breakdown of Tasks & Grading criteria

You are required to produce the following for the unit:

1. Write a 1500 word essay on the use of sound in a game of your choice. This essay should include reference to research you have undertaken and academic theory. Within the essay you should discuss the technological implications on sound in the game and the different roles and their respective responsibilities in creating audio for the game industry and in games. Explain how game designers use sound and music to enhance a player's gameplay experience, analyse the purpose of the sound in the game, from creating 'mood' and 'immersion', to helping players to 'anticipate'; you should identify any techniques used to achieve these purposes using appropriate terminology. You should include your own opinions on the relative successes and failures of the sound in relation to other games and film.

   Grading criteria addressed by each Task
   - P1/P2
   - M1/M2
   - D1/D2

2. Produce between 30-90 seconds of audio for in-game footage. Working as part of a team (of up to 4 People) you will compose and perform an audio soundtrack for in game footage giving careful consideration to your soundtracks appropriateness and audience expectation for the genre (see below) you are working in. During the course of composing and performance you will record the individual

   Grading criteria addressed by each Task
   - P3/P4
   - M3/M4
   - D3/D4
audio components of your composition using digital audio recorders, 10 or more original sounds should be recorded and used in individual compositions. Each member of each team will use audio sequencing software to edit, mix and master their own version of the composition to be synced up with the in-game footage before being handed in and presented to the class. You will also produce a (digital) workbook detailing your research, your artistic reasoning, your compositional process, your recording process and your post production decisions.

**Note:** The genre should be dictated by the piece of footage you have chosen, alternatively you can choose footage that would fit with one of the genres from last year’s Digital Graphics Unit, here’s a reminder;

- **AvAlon**, a swords and sorcery based (button bashing) combat game loosely based the Arthurian Legends etc
- **Botz**, a collection/pet simulation game intended for mobile platforms, set in a world of cute customisable Robots
- **Master on at Arms**, a full naval battle simulation/strategy and TBC (Turn Based Combat) game set in the 1700’s
- **Metropolis**, a high end Futuristic Dystopian society simulation MMORPG loosely based on parallel universe theory where the player jumps between 3 different versions of reality, in a quest to find the original ‘Metaverse’
- **Gliese 581** All action FPS Based on an advance party of ‘terraformers’ sent to assess and establish the first human colony on Gliese 581 on of the new ‘super-earth’ type planets recently discovered that have a good chance of supporting human life.

3. Write a 500 word evaluation on the game audio you produced and the processes used to make it.

Make sure you use your workbooks effectively to support your research evidence and sound creation evidence throughout the process.

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**Extension Activities**

You Can extend your activities and achievement through:

1. A wider approach to researching the area of sound for games and sound effects and engineering in general
2. Extension of study skills and note taking techniques to further improve your critical analysis, planning and contextual appreciation, mind maps use of VLE and other pedagogical (learning) software
3. Produce complex and highly realised task outcomes by utilising professional techniques and practices, demonstrated by evidence and documentation.
4. Demonstrate an advanced ability to communicate through academic discourse and discussions (both in seminar lecture and written or presented situations)
5. Production of sophisticated evaluative texts (PPT, FLASH, Video Capture etc) and considered integration with a production blog/diary
6. Identification of opportunities for further study and annotated or noted down approaches for the extension of gained skills or knowledge which could be useful on future units (ie generation of sounds and and pre production asset generation for Unit 72 Games Engines or Unit 04 Creative Media Production Management Project)
<table>
<thead>
<tr>
<th>Materials &amp; Equipment required</th>
<th>Key Words &amp; Techniques</th>
<th>Generated in your personal study Glossaries</th>
</tr>
</thead>
</table>

### Research & Contextual References

#### Books
- Collins K – *Game Sound* (MIT Press, 2008)
- McCuskey M — *Game Audio Programming* (Course Technology, 2003)

#### Websites
- [www.audiosparx.com](http://www.audiosparx.com) — online resource for digital audio
- [www.filmsound.org/game-audio](http://www.filmsound.org/game-audio) — game audio articles
- [www.gamershell.com/movie_download_archive.html](http://www.gamershell.com/movie_download_archive.html) - Downloadable game footage and trailers
- [www.gamasutra.com](http://www.gamasutra.com) — respected website for all things game development,
- [www.gamedev.net](http://www.gamedev.net) — a forum, with good articles on all things game development and excellent game developer resources
- [www.igda.org](http://www.igda.org) — non profit-making industry body, useful for research and learning support

*Please see Brief and task list for advice and guidance. Moodle will provide some relevant documents.*

### Evidence to be produced for Project

#### Over the duration of this project you will be required to produce the following:

1. 1500 Word Essay on the use of sound in a game of your choice.
2. A.
   - DVD containing audition file and raw audio files (at least 16 bit, 44.1 KHZ) and your final mixdown in Wave format, a 720 x 576 quicktime movie and an mpeg compression movie of your audio content synced up with 30-90 seconds of in-game footage.
   - B.
     - Minimum 10 page A3 or 20 Page A4 workbook documenting your research and processes. Include production schedule, recording log, screen grabs, contextual references etc.
3. 500 word evaluation of your game audio and the processes used.

### Date of submission – Monday 09/01/12 to VA Office Ground Floor YORK Building by 4:30pm

***DEADLINES ARE ABSOLUTE !!!***

Failure to meet ANY deadline without prior agreement by the course leader will result in Disciplinary Action being taken.

### Key Skills/LLN opportunities

Various tasks and activities to address differentiation regarding literacy, glossaries and word games to reinforce vocational terminology. Brief written to address a range of skills allowing learners through differentiated tasks, to gain levels of expertise at various levels from Pass to Distinction. Additional support through TSA (where appropriate) who have access to Moodle and Unit material for preparation and support in key areas of the Unit programme.
<table>
<thead>
<tr>
<th>ECM opportunities</th>
<th>Being healthy</th>
<th>Staying safe</th>
<th>Enjoy and achieve</th>
<th>Making a positive contribution</th>
<th>Achieving economic well-being</th>
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<tr>
<td>Highlight which ECM outcomes the brief addresses?</td>
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### Unit 73: Sound for Computer Games - Grading Criteria

<table>
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<tr>
<th>To achieve a pass grade the evidence must show that you are able to:</th>
<th>To achieve a merit grade the evidence must show that, in addition to the pass criteria, you are able to:</th>
<th>To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, you are able to:</th>
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<tbody>
<tr>
<td><strong>P1</strong> describe uses of sound and music in games using some subject terminology appropriately</td>
<td><strong>M1</strong> explain use of sound and music in games with reference to detailed illustrative examples and with generally correct use of subject terminology</td>
<td><strong>D1</strong> comprehensively explain use of sound and music in games with elucidated examples and consistently using subject terminology correctly</td>
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<tr>
<td><strong>P2</strong> describe methods and principles of sound design and production using some subject terminology appropriately</td>
<td><strong>M2</strong> explain methods and principles of sound design and production with reference to detailed illustrative examples and with generally correct use of subject terminology</td>
<td><strong>D2</strong> comprehensively explain methods of sound design and production with elucidated examples and consistently using subject terminology correctly</td>
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<td><strong>P3</strong> create sound assets for a computer game following industry practice, working within appropriate conventions and with some assistance</td>
<td><strong>M3</strong> create sound assets for a computer game working to a good technical standard following industry practice, showing some imagination and with only occasional assistance</td>
<td><strong>D3</strong> create sound assets for a computer game working to a technical quality that reflects near-professional standards following industry practice, showing creativity and flair and working independently to professional expectations</td>
</tr>
<tr>
<td><strong>P4</strong> apply sound assets to a computer game following industry practice, working within appropriate conventions and with some assistance</td>
<td><strong>M4</strong> apply sound assets to a computer game working to a good technical standard following industry practice, showing some imagination and with only occasional assistance</td>
<td><strong>D4</strong> apply sound assets to a computer game working to a technical quality that reflects near-professional standards following industry practice, showing creativity and flair and working independently to professional expectations</td>
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