Chapter XVIII

From SYnthia to Calma to Sybil:
Developing Strategies for Interactive Learning in Music

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Abstract

This chapter describes the development of software for teaching music and music technology at the University of Huddersfield in three projects spanning the last 14 years. The importance of engaging music students with sound itself and the potential of technology to facilitate this is a key feature of all three projects. The value of developing software that is adaptable and extensible is explained. The lessons that have been learnt in the development of these projects are described, and the chapter ends with a provocative vision for the future.

Introduction

Over the last 14 years research in learning technology has been a strong feature in music at the University of Huddersfield. Three different software packages (SYnthia, Calma, and Sybil) have been developed, and although they do not all cover the same aspects
of music, each successive package has built on the lessons learned from the previous software. Initially, each of the packages grew out of our own teaching situation at Huddersfield and challenges we faced, but the issues and the solutions we have proposed have proved of wider interest, nationally and internationally. All three programs have been awarded European Academic Software Awards (in Heidelberg in 1994, in Rotterdam in 2000, and in Le Locle/Neuchâtel in 2004, respectively). A key goal of all three packages has been to give students the opportunity to engage with music as sound not just as text on the page, and for this engagement to be interactive.

The chapter charts the development of this work, compares the approaches of the different programs, and describes the lessons we have learnt. It investigates the general issues raised by these developments and explores their potential for wider application. It ends with a vision for the future.

### Background

Huddersfield is one of the largest music departments in the UK. It has long had a reputation for combining theoretical and historical “academic” study of music with a practical engagement with the practice of music through composition and performance. It also has had a long involvement with music technology, initially just as a component of the music degree, but also, more recently, in specialised music technology degrees. Some of these degrees are run in conjunction with electrical engineering, and students come from a variety of backgrounds. Two of the software packages described here were designed particularly with a view to making technology more accessible to students from an arts background, to facilitate the teaching of students with a range of different academic experience, and to encourage a creative approach to the use of technology in music.

All three packages aim to engage students with sound. Simply reading a book or attending a lecture can lead to study that is remote from the sound that is the key element in the discipline. Lecturers may play musical examples and written texts may direct students to scores or CDs, but for many students this is not as stimulating as experiencing the music for themselves, especially engaging with it interactively.

Of course much commercial software does exist for music. This is especially the case for the sub-discipline of music technology. However, little, if any of this, provides the sort of learning experience we have been seeking to create. Most music technology software is designed for the production of music and not for teaching the underlying principles. Indeed, some of this software encourages a trial-and-error approach, with little opportunity for the user to develop a better understanding of how and why things work. This can sometimes produce good results, creatively speaking, but for a degree course, we believe our goal should be to deepen students’ understanding and to provide them with the skills and knowledge to develop and adapt as the technology advances. The challenge is how to devise a curriculum that will help students to develop technical understanding and to do so in a way that is seen as creatively relevant and stimulating.