

Project Report

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Abstract

Stuff about Pipes

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1 Introduction

- Create a virtual instrument for the Uilleann pipes
- not many there in advance
- Create a VST plug-in that can be used in digital audio work stations

2 Analysis

2.1 How Uilleann Pipes Work

2.2 Physical Modelling Synthesis

- Original Plan

- Mathematical Model of the Sound Wave (not simulation)
- Fairly easy on string instruments
- Uilleann pipes relatively obscure
- out of scope for the project

2.3 Subtractive Synthesis

3 Design

- Drone and chanter
- voices
- juce

4 Implementation

- classes
- juce plug-in layout

5 Evaluation

6 Conclusions

7 Appendix

8 Appendix 1 - How to use Juce

9 Appendix 1 - Music Example