

Part II Project Progress Report

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Project Title: **Music Generation in Microsoft Excel**

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The following tasks were to be completed for the project to be deemed a success:

- Implement an API for music playback within a spreadsheet.
- Implement a converter from formal music notation to the spreadsheet representation.
- Usability testing for music generation implementation.

At this point in time I was expecting to have finished the API for music generation within Excel.

The specified features, all of which, and more, have been completed are as follows:

- Playing individual notes and chords, defining their durations.
- Having multiple musical parts play at once.
- Being able to define loops.
- Being able to define sequences of notes and chords which can be referred to elsewhere.
- Defining the tempo of playback.

The Microsoft spreadsheet API has broadly been pretty usable and quickly allowed me to write my own code using data within the spreadsheet. I have also made use of the Javascript library Tones for creating sounds. As my understanding of this library has evolved there have been a couple of redesigns.

I have begun co-operative evaluation with a series of participants. I have currently run introductory sessions with 18 people. This has been earlier than expected so formative evaluation can take place. The sessions have involved teaching participants to use the system and evaluate the carrying out of a task (mostly of their choosing). All participants have agreed to continue using the system over the course of the term and shall take a questionnaire, or similar summative evaluation, towards the end of the term.

Whilst the usability testing has been ahead of schedule the implementation of a conversion from formal music notation to my own has not yet taken place. The system is currently fairly expressive and can be used to express a wide variety of standard music notation in addition to having some expressive powers beyond standard staff notation. Therefore in its current state it would be possible to build a converter, but as changes are still to be made, I am delaying this a little further. Because the evaluation is ahead of schedule and the interface is still being changed, this is not seen as a problem.

Only being two weeks into term I feel perfectly on track to have finished all design, implementation and evaluation by the end of the term. This will give me ample time to create a high quality write up.