



Use of audio editors in radio production

Chris Baume^{1,2}, Mark D. Plumbley², Janko Ćalić²

¹BBC Research and Development, London, UK. Email: chris.baume@bbc.co.uk ²Centre for Vision, Speech and Signal Processing, University of Surrey, Guildford, UK

Introduction

- Production of speech-based radio programmes, such as documentaries, involves a significant amount of audio editing.
- The tools used to edit audio are general-purpose and not designed for the unique demands of speech content.
- A range of semantic audio technologies are available which could improve the tools available to producers.
- Understanding the process and demands of radio production is essential in designing better tools for that environment.
- A study of radio production practice was conducted on three varied case studies news bulletin, drama and documentary.
- The study used observation and unstructured interviews to examine the roles, environment and workflow in radio.

News bulletin

- The team that was observed are responsible for writing the scripts and cutting the clips for the hourly news bulletins.
- An assistant editor leads a team of 4 broadcast journalists.
- They are located in the newsroom at BBC Broadcasting House where the work is extremely fast and dynamic.
- A basic waveform-based editor is used to create audio clips.
- Sometimes a short clip needs to found in a long recording, which is slow and difficult with the current interface.
- Each clip must be annotated with the 'in- and out-words'.

Documentary

- The observed documentary was produced in three weeks in three week-long stages research, interviews and editing.
- A producer, presenter and researcher work together on it.
- Each interview is immediately transcribed and printed, which makes it easier for the team to collaborate.
- Important bits are highlighted on paper and later edited into a rough cut by the producer, which can take a lot of time.
- On the last day, an engineer turns this into the final version by removing redundant speech, known as 'de-umming'.

Drama

- Drama production is based around a printed script.
- A team of five run the recording in a purpose-built studio.
- During recording, the paper script is annotated in detail (see Fig. 1) which is later used to create a rough edit.

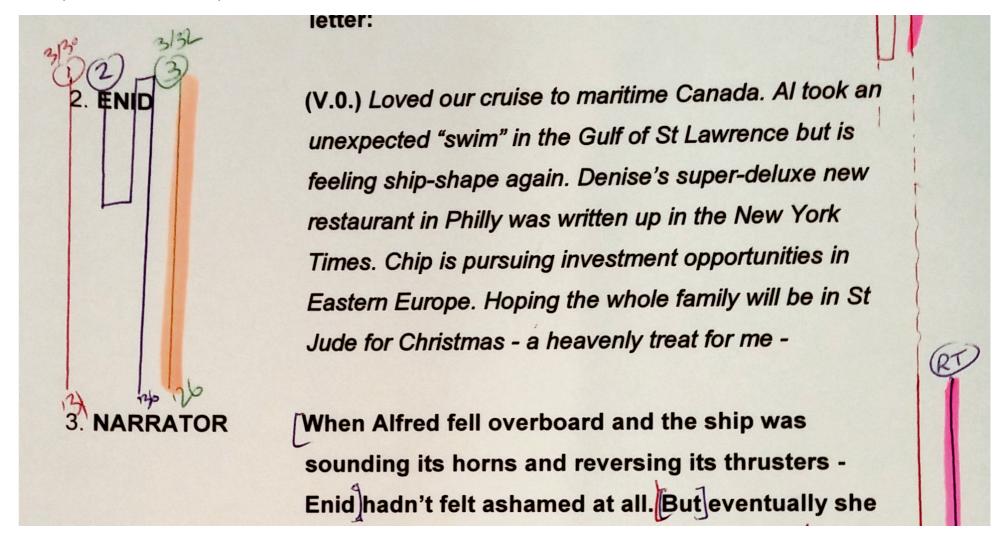


Figure 1: Example of an annotated script.

Findings

- Producers work with paper copies of high-level representations of speech like scripts/transcripts, which adds overhead.
- Many mundane tasks like 'de-umming' could be automated.

Next stages

• A prototype transcript-based speech editor was created (see Fig. 2), which will be evaluated on five real productions.

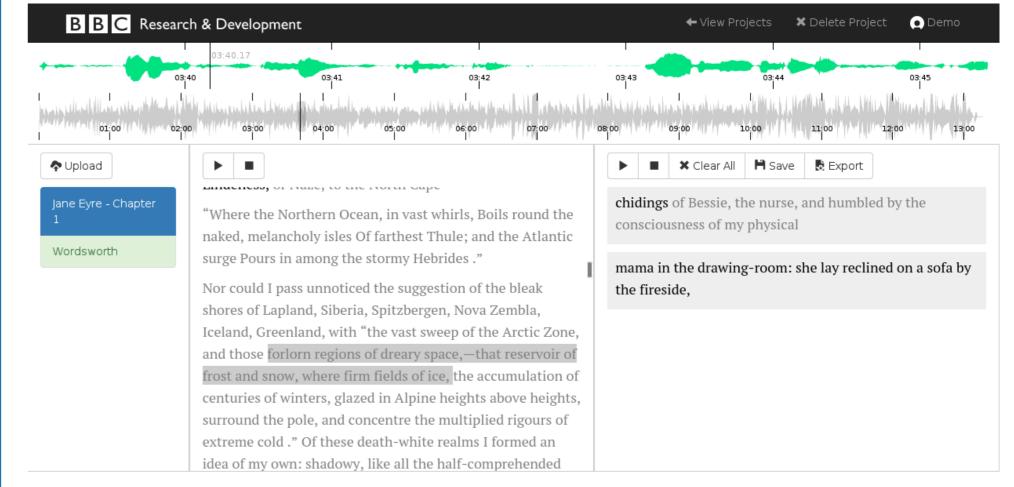


Figure 2: Prototype system - speecheditor.virt.ch.bbc.co.uk