



Talking Friends: a future digital recording process

1 Purpose of this Report

We offer this report to introduce all those involved in Talking Friends to a new 'digital' method of recording our publications.

Producing Quaker published materials in alternative formats is an important way of honouring Britain Yearly Meeting's commitment to equality. Our audio-publications for those with a visual impairment were mostly written by and for Quakers, but have a wider appeal.

The publications are available to Friends and attenders, and other interested people with a visual impairment or other disability which prevents them reading the printed version.

An apology early on: we cannot avoid all the jargon of the newer technology. This report tries to minimise the use of such jargon, and, we hope, explains the jargon we cannot avoid.

Background

Since the formation of Talking Friends, recordings have been made on 'compact cassette' tapes, which have been the standard format used since the 1960's by organisations offering 'talking books'.

Our volunteers record publications onto these cassette tapes using commercial-quality tape recorders and send these master cassette tapes to Quaker Life at Friends' House for copying and distribution to our subscribers. Subscribers return cassettes to Quaker Life for re-use.

We have investigated newer technology for recording and distributing audio publications. We have sought the views of our subscribers, one of our trustees has carried out a technical evaluation of the technical options, and we have carried out a trial recording of The Friend in a CD-based format.

2 What is digital recording?

- Cassette recording is known as an analogue system, in which the recording has a pattern similar to the sound waves that we hear.
- Digital recordings are made using a personal computer (PC) with a good quality microphone and some kind of editing software such as Adobe Audition, Audacity, or MAGIX Audio Cleaning Lab.
- The computer converts the sound signals from analogue waves to a series of 'binary numbers' that consist only of '1' and '0's.
- The quantity of numbers produced per second is called the 'sample rate'; the larger the number, the higher the quality of the audio recording.

- These numbers are stored on digital recording devices such as 'memory sticks'.
- The resulting digital recording may be an 'as recorded' uncompressed .wav file or 'compressed into an .mp3 format to reduce the amount of electronic storage space required.

'Memory Sticks'

- Memory sticks are devices that plug into a PC, and store digital recordings; they are available with a range of storage capacity; the smallest, 512MB, can hold up to 5 hours of 'uncompressed' recording.
 - Memory sticks can be reused without any noticeable deterioration in recording quality.
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3 Why introduce digital recording?

- All current readers and subscribers are familiar with the cassette system and have the required equipment, but
 - The standard audio cassette system is over 40 years old. It is still possible to buy new cassettes, but there are fewer sources.
 - There are fewer new cassette recorders and players available and fewer repair facilities;
 - Digital audio technology has the major advantages of quality, ease of recording and editing, and can be shared from one central point via the Internet. This newer technology may offer more useful functions to users.
 - Our subscribers increasingly have access to newer technology at home, such as audio and computer systems;
 - Users' expectations have been influenced by other providers, such as RNIB, who are already using newer technology. RNIB have told us that they have a reducing group of long-established subscribers who are not able to move to digital technology.
 - We have asked our subscribers for their views on, and their access to, newer audio technology such as CD players and the internet, and their preferences for such systems.
 - While 50 % of Talking Friends' present subscribers have stated a preference to continue using cassette tapes, 25 % would be prepared to move to digital recordings if they were offered the opportunity to learn about the new system.
 - When we record directly to digital format we can continue to offer analogue cassette recordings that can be made from the digital 'master' files.
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4 How will we introduce digital recording?

Firstly, our objectives when we introduce this new technology are to:

1. Focus on the needs, resources and ability of our subscribers; we believe that the greatest impact will be on our readers.
2. Ensure that the new system and the change-over process are as simple as possible for our members and our volunteer readers; we shall provide recorded materials in formats with which our subscribers are familiar.
3. Minimise the cost, especially the need for users to obtain new equipment.
4. minimise the need for physical copying and distribution, at present dependent on the service of Friends at Quaker Life, and
5. To add relevant and useful features if possible, such as indexing and stop/restart functions. We shall confirm that we shall be able to make a digital recording with stops and starts in much the same way as we do on the cassette recordings.

We have concluded that we should

- 1 Introduce digital recordings of the publications we offer for subscribers who wish to receive them in this format;
- 2 use *MAGIX Audio Cleaning Lab* computer software, and
- 2 distribute these recordings to our members on re-usable 'memory sticks'.

The practical steps are:

- 1 The 'learning' process
 - We have agreed to purchase four copies of the *MAGIX Audio Cleaning Lab* software
 - The recording teams equipped with this software are to prepare (we hope, simple) instructions for the digital recording process, based on the existing practice for recording cassette tapes.
 - This is a pilot stage, involving our reading teams and listeners to test the technology and the usability before finally approving the new system.
- 2 **Digital recording**
 - Each team of readers is to be set up with a computer, microphone and *Audio Cleaning Lab* recording software, and the instructions for the digital recording process.
 - Recordings will be made by creating a computer file in a .wav 'uncompressed' format and recording these onto one 'memory stick' for each subscriber.

- The reading group will select and edit material before recording as is the present practice.
- At this stage we shall produce a master cassette tape from the digital recording, for copying to those who continue to prefer to receive tapes.

2 Distribution

- These memory sticks are to be sent to our subscribers through the free postage system.
- They are to be returned to a central point (now Friends House) for re-use in the same way as cassette tapes. We hope that Friends at Quaker Life will continue to provide this service.
- In the longer term, a decision will be required about the viability of a physical distribution network, in terms of resource efficiency, effectiveness, and the need to minimise environmental impacts.

3 Playback by our subscribers

- These 'memory sticks' can be played on all CD playback devices fitted with a USB (Universal Serial Bus) socket including all PCs and most domestic audio CD players.

5 Our thanks

This report has been prepared by the Talking Friends Committee.

We are very grateful for the advice we have received from our subscribers, members of our recording teams and from Danny Collman of Birmingham Talking Newspapers, who has shared his/ their practical experience of introducing digital recording and demonstrated the ACL computer software to us.

A personal note: as the 'compiler' of this report I am happy to accept responsibility for the structure of this report and any spelling or grammatical errors!

Victor Lobb

Appendix 1:

MAGIX Audio Cleaning Lab editing software Version 16.

ACL is audio recording and editing software, now available in Version 16. The emphasis is on 'cleaning' audio through a three-stage process of importing, editing and exporting.

MAGIX's description of their software

'MAGIX Audio Cleaning Lab 16 deluxe makes you perfectly equipped to edit any kind of audio: Quickly and easily digitize old records and tapes, remove all kinds of noise with ease – without prior skill and all with a single click.

Restore songs however you want to: Fully automatic, step-by-step, or completely individually. Choose the extensive complete solution and get the best sound for your audio material.

Features:

- * *Simply record and digitize songs and voices*
- * *Edit and cut audio material*
- * *Restore songs or recordings and remove disturbing noise*
- * *Tips & tricks for audio editing and recording*
- * *Spectral Cleaning: Remove noise from audio recordings precisely and loss-free*
- * *Optimize your sound with professional audio effects*
- * *Ideal for editing video sound and high quality video comments*
- * *Burn recordings to CD, convert and export MP3s, WAV and more*

System requirements

- * *OS: Windows XP | Vista | 7*
- * *PC with Intel® Pentium® or AMD® Athlon® 1 GHz and higher*
- * *512 MB RAM (1 GB recommended)*
- * *Free hard disk space: 500 MB*
- * *Graphics card resolution 1024 x 768*
- * *16-bit sound card*
- * *DVD-ROM drive'*

The software licence is for one installation on one computer.
There is not an Apple MAC compatible version of this software.

ACL have an office for customer support in Germany, staffed by English speakers, and can be contacted through a UK telephone number 0203 318 9218

Full details of ACL are available at their homepage:

<http://www.magix.com/us/audio-cleaning-lab/> and

http://www.magix.com/uk/audio-cleaning-lab/?partnerid=9009&AffiliateID=2&gclid=CO2qyL_Nq6ACFdkB4wod3RdTrQ

The new recording process

The control windows on the computer screen:

- have buttons that look like those on a cassette tape recorder, including 'level controls' for optimum recording volume
- have indicators of the duration of the recording being made and the recording time remaining on the selected disc.
- enables items to be numbered for indexing
- enable new items or pauses to be inserted between existing items
- enable the order of recorded items to be changed.
- do not provide for the insertion of audio signals as on the present tape recordings; this is unnecessary because the individual items may be recorded as separate tracks.

Another window controls the transfer or export of the file:

- to a copy of the original file,
- to a memory stick,
- by the burning of a CD, an Audio DVD or a data CD/ DVD.

At the default setting for the sampling, that is quality, of the recording, the storage capacity needed is 9MB per minute of recording time in the proposed 'uncompressed' format.
