

Voice & Message Banking

Voice and message banking is the process of recording and storing an individual's voice that can then be used to support communication.

There are two main types of voice banking:

- Message (Word and Phrase) recordings – 'Message Banking'
- Creating a personalised synthesised voice – 'Voice Banking'

Both types of banking can be used as an effective communication tool.

Individuals can record and store their own voice or may use a 'proxy'. The 'proxy' is usually someone who sounds similar, or has a connection to the individual.

The recordings of words/phrases can then be used to speak a message from a smart phone, computer, or tablet, or via a communication software package.

A synthesised voice can be downloaded onto specific communication software packages. This gives the option of having a more personalised voice, rather than the standard computer-generated voices that are more typically available.

Other useful sources of information on voice and message banking, including:

- The Royal College of Speech and Language Therapists www.rcslt.org/speech-and-language-therapy/clinical-information/voice-banking
- Boston Children's Hospital and the work of John Costello:
<http://www.childrenshospital.org/ALSmessagebanking#>
- The Motor Neurone Disease Association: www.mndassociation.org/support-and-information/living-with-mnd/speech-and-communication/ & www.mndassociation.org/professionals/management-of-mnd/aac-for-mnd/voice-banking/
- MSA Trust: <https://www.msatrust.org.uk/support-for-you/for-people-affected-by-msa/voicebanking/>

Please also note – there are other techniques and approaches to personalising communication – for example in personalising the words and phrases used and stored, and [in making recordings of speech for legacy or other reasons](#).

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Created: June 2015

Updated: 21 October 2020

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Contents

Creating a Personalised Synthesised Voice (Voice Banking)	3
Personalised Synthetic Speech Options.....	4
Model Talker	4
My Own Voice (Acapela).....	4
CereVoice Me.....	4
VocaliD	5
The Voice Keeper	5
SpeakUnique	5
Other Synthesised Voices	6
Voice Recordings (Message Banking)	7
What messages?	7
Using recordings – Phones/Tablets	7
Using recordings – AAC software.....	7
Using recordings – other tools.....	7
Oral Histories / life legacy.....	8
Record Me Now	8
Appendix 1 – Comparison of Voice Banking Services	9

Creating a Personalised Synthesised Voice (Voice Banking)

A synthesised voice is a computer-generated voice that can speak out any text entered into the computer. Voice banking can be used to create a 'personalised' synthesised voice – a computer generated voice that has *characteristics* of the original, natural voice.

Many the systems have costs attached, but some charities may support funding this – for example for [people living with MND, the MND may fund the voice](#), the [MSA Trust have a collaboration with Acapela and fund this service](#) and the [PSPA are partnered with Speak Unique](#).

All the systems currently are completed online in some format and the person banking their voice is required to read a number of sentences out loud into a microphone. The number of sentences an individual needs to read varies depending on the system used – [see the table below \(appendix 1\)](#). These sentences are designed to capture all the required phonemes (speech sounds) needed to build the voice.

Remember that a personalised, synthesised voice:

- Will sound like person's voice at the time of recording - so any changes that have already occurred to an individuals' speech will be included in the final voice.
This is different for the voice "repair" systems (see below for details) – but people using these voices still find that they sound different.
- May not sound exactly like the individual but is a version of the voice.
- May be less understandable than a high quality commercially available synthesised voice.
- May take a lot of effort to create.
- May not work with all communication software or platforms.

Tips to create the best possible personalised voice:

- Make sure the recordings are the best quality - use the system's feedback to check this.
- Use a good quality USB microphone/sound card (not an inbuilt microphone).
- Find a quiet environment to record in (that is the same each time).
- Try and speak in a consistent way, with the same rate and volume each time.
- Try not to record while tired.

Personalised Synthetic Speech Options

[Model Talker](#)

ModelTalker is a service run by an American research laboratory. It creates a personalised voice that can be used with a range of communication aids. You will need a windows computer, Chrome web browser and a high-quality USB microphone (they recommend Sennheiser PC 36). There is immediate feedback on the quality of the recordings - but as they use American English models do not worry if you get a red indicator for pronunciations. Alternatively, you can directly record your voice into the [Predictable communication app](#).

You will need to record and initial 10 sentences for screening. Once this is approved, you can start the full standard inventory of up to 3155 sentences, but can be submitted after 200, but this will affect the quality of the resulting voice. They recommend that for a natural sounding voice 1600 sentences. The full inventory will give you the highest quality voice.

Creating the voice is free. You can opt to donate your voice for the research project. Once completed you will get a choice of samples to choose from. The voice costs £80.

[My Own Voice \(Acapela\)](#)

MyOwnVoice voice is available from Acapella who make many of the existing commercially available voices. You only need to record 50 sentences using a windows or mac computer, using a high-quality USB headset. They claim this can be completed in about 30 minutes. You can also message bank a range of phrases as part of the voice banking system.

There is currently no charge for completing the recording process and there is a free 3-month evaluation period. There is a one-off charge of €999 (approximately £877) is applied if the person wishes to download their synthetic voice on to a device or Accapela will store the voice for €99 per year (approx £87). The person recording will also need to purchase a headset to record phrases. The user interface is available in 15 languages.

My-own-voice synthetic voices can be used on the [Proloquo4Text](#) or [Predictable](#) apps, but also potentially any system that uses Acapella voices including apple, windows and android systems.

[CereVoice Me](#)

CereVoice are a producer of commercial synthetic voices. This service currently costs £499, which includes a microphone that is sent to be used for the recordings. Payment is made up front but will be refunded if the person is unable to proceed beyond the initial trial phrases. Once the full recording process is started, the costs will not usually be refunded.

It is completed online and for the English version you need to record 620 sentences. They can also make a voice from good quality pre-recorded sentences.

CereVoice Me is available in English, Spanish, French, Swedish, Italian and Romanian. One aspect of this service is that it is possible to tweak the final voice. It can be used with [The Grid 3 communication software](#) and could be included in an order from Smartbox.

VocaliD

This service offers 'vocal legacy' and 'bespoke voice' options.

Vocal legacy is a voice banking service that requires 1000 to 2000 sentences to be recorded. They will work with you to complete a voice if you are unable to complete all the sentences. You require a good quality microphone and a laptop with Chrome or Firefox web browsers.

Anyone can donate a voice to this service to improve the wider quality of voices. Initially 9 sentences are auditioned, and feedback is provided, before you complete the full inventory

The 'bespoke voice' service uses the donated voices that the service has collected to make a voice for a person with speech difficulties or very little speech from a recorded sample which they blend to match the individual's unique voice.

The cost for both services is currently \$29.99 (approx. £22) for a preview and \$1499 (approx. £1096) to download the voice. It can be used on [their own text to speech app on iOS and Android](#) as well as [Touch Chat on iOS](#). It can also be used on an [Accent \(bespoke device from Liberator\)](#) or [Tobii DynaVox iSeries](#).

The Voice Keeper

This service can be completed online on a Windows or Mac computer through Chrome or using an iPhone or iPad app. You will need a good quality USB microphone to complete the recordings on a computer but can use the inbuilt microphone when using an Apple device. They recommend using as new a device as possible and ideally an iPhone as the microphone quality will be much better.

You can create a voice example after 30 sentences, but the number of recordings will affect the quality. Voice Keeper uploads the information after each 100 recordings and gives you an opportunity to listen to the produced voice within a few hours. The complete number of recordings is 500 sentences, they claim that you can get a useable voice with 100-300 sentences. There is an option when recording through a computer for an auditory prompt if needed for pronunciations as some of the vocabulary used is unusual. This is not available on the app, but you can request shorter sentences. You can also add in recorded messages to the system.

It is free to record on this system and you can evaluate it for free for 90 days. There is also a system for a person to donate their voice for someone else. For a one-off payment of \$299 (approx. £220) for the voice to be downloaded to a windows device to use with [Communicator 5](#) or [The Grid 3](#) communication software or to an [Accent \(a dedicated communication aid from Liberator\)](#). This one-off payment includes the service generic voices as well as your personalised voice. The Voice Keeper can be used with a range of iOS or Android apps for \$75 (approx. £55)

SpeakUnique

This system offers a range of options depending on if your voice has already been affected. They state that the recordings can be completed in approximately an hour, but you can stop and start when is best for the individual. You will need a laptop or desktop (Windows or Mac) and a good quality USB headset microphone. You will need to record a minimum of 150 sentences, but they recommend 300, the initial 50 are the same for everyone and the remaining can be chosen from a range of scripts. It is free to record. They offer a number of services:

- Voice Build – enables someone with no speech difficulties to bank their voice and generate a personalised voice. Once completed you will hear a sample and then pay £175 to download.
- Voice Repair - if someone already has mild or moderate changes in their speech, this service will “repair this” in your synthetic voice. Requires a recording of at least 150 sentences, but they recommend that you complete as many as possible. It will offer 5 samples for you to choose from. This costs £250.
- Voice Design – enables someone with no intelligible speech, to design their own bespoke voice based on desired characteristics, such as accent, age and gender, by blending different voices together to create a bespoke voice. It won't be the same as your voice, but they can work with you and to create a voice as close as possible. You can nominate up to two voice donors to get a closer match such as family or friends. This service costs £300.

Other Synthesised Voices

Many high quality, non- personalised, synthesised voices now exist, and can be used with communication software, for example: <https://www.cereproc.com/en/products/voices> or <http://www.acapela-group.com/>

Voice Recordings (Message Banking)

You can record messages in lots of different ways – either through a computer, a smart phone (iPhone etc) or tablet.

It is a good idea to:

- record in a quiet place;
- record in the same place;
- not to let your voice rise at the end of the message (unless you are asking a question);
- not be a perfectionist about the process - for example, pauses, errr's..... etc. are all fine;
- name the recording a sensible name so you can easily use it later.

What messages?

It may be hard to work out what to record. One idea that can help is to keep a communication diary – i.e. jot down in a note pad when you say a phrase you think would be good to record for future use.

You may want to think about recording messages related to:

- your personality,
- your interests/hobbies,
- your humour,
- messages for control (e.g. "Leave me alone, Come back later),
- messages you can use on the phone,
- emotions,
- greetings, chit-chat,
- potential needs for the future (e.g. messages relating to medical or personal care issues).

Using recordings – Phones/Tablets

A simple way to use the recordings is to name them appropriately (e.g. Hi, want-a-pint, bye) and to save them on a phone or a tablet. You can put the recordings in folders in the same way you would put music onto a device.

Using recordings – AAC software

Recordings can also be used in specific communication software. For example, the phrase is put behind a button that you press on the screen. You can add different messages/ phrases to different buttons.

This may allow the messages to be:

- More easily accessed
- For them to be combined with another message using synthesised speech
- Accessed via another method other than touch e.g. switch access

Using recordings – other tools

These services enable the recording of phrases that can be used alongside a personal voice on a communication aid.

- **My Message Banking** is a dedicated website to allow you to make recordings. You can choose to download the messages you record on this site at no cost. It can be used with [Tobii Dynavox devices](#).
- **The Grid 3 AAC software** - has a built-in section to have recorded phrases that can be played.
- **Predictable App** – enables message banking which can be done through the app or online through your account.
- **Model Talker** – as part of the [Model Talker service](#) you can record custom words and sentences. This allows for more personalisation within the system.
- **My Own Voice (Acapela)** - as part of their voice banking service will offer a message banking service that can be used at the time of recording or subsequently.

Oral Histories / life legacy

This is a support system that offered the opportunity to the recording of unique life experience and is offered by many end of life services such as hospices, Marie Curie and Macmillan care. Oral histories capture voices and memories and people are involved in the process of producing their own life histories.

This can also be done independently using a system (we only know of one at the moment):

Record Me Now

This is a service for recording your life history and stories for your family. It can be done online or through an iOS app. The service is available at: <http://recordmenow.org/index.php/home-2/>

Appendix 1 – Comparison of Voice Banking Services

Name	Number of Sentences	Recording Requirements	Voice Works with	Languages	Cost
Model Talker	Up to 3155 but can be submitted from 200.	Windows or mac computer with Chrome and USB headset.	Grid 3 Predictable	American English and English	\$100 approx. £80
My Own Voice (Acapela)	50	Windows or mac computer and USB headset	Proloquo4Text and potentially any system that works with Acapela on windows, iOS or Android	15 different languages	€999approx. £877 Or subscription for €99 (£87) per year
CereVoice	620	Windows or mac computer and their own microphone	Grid 3 and potentially any system that works with CereProc	English, Spanish, French, Swedish, Italian and Romanian	£499 – including a microphone
Vocal Id	1000 to 2000	Windows computer with Chrome or Firefox and USB headset	Tobii Dyanvox i-Series and their own app on iOS and Android TouchChat on iOS and the Accent	American English and English	\$29.99 (approx. £22) for a preview and \$1499 (approx. £1096) to download the voice
The Voice Keeper	Up to 500	Windows or mac computer and USB headset or through an app on an iOS or Android	Grid 3 or Communicator Any system with TTS.	American English and English	\$75 (approx. £55) for an iOS or Android app or \$299 (approx. £240) download
SpeakUnique	Minimum of 150 up to 300	Windows or mac computer and USB headset	SpeakUnique app iOS, Android and Windows devices with SAPI5 format.	English	Build a Voice £175 Voice Repair £250 Voice Design £300