

WELCOME!

August 15, 2022



The ALS Association

National Office-Care Services

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**Every Word Counts:
Voice and Message Banking for People With ALS**

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Every Word Counts: Voice and Message Banking for People With ALS

Alisa Brownlee, ATP, CLIPP, CAPS, WSP

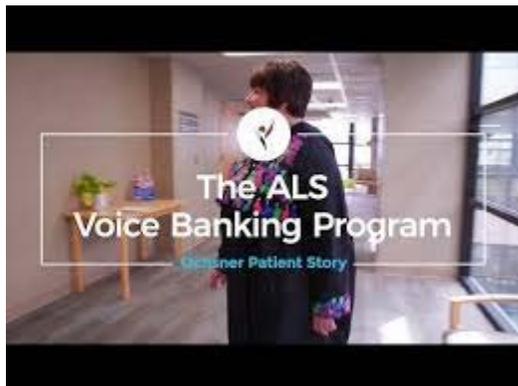
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Voice Banking and Message Banking

- Voice banking is the process of recording your voice for possible future use on a communication device
 - This is something that even newly diagnosed PALS may wish to consider, since it is best to make the recordings before significant speech or voice changes as the person needs to record phrases and sentences
 - The idea of losing your voice can be frightening and due to the nature of ALS, professionals can not tell is a person will experience communication difficulties so think of voice banking as an insurance policy
 - Current technology requires recording hundreds or thousands of phrases and sentences
 - These recordings are fed through voice analysis software to obtain a synthetic voice
- Message banking is the process of playback of recorded messages
 - Recorded messages can be programmed into a SGD and used when needed for communication
 - With this method, only recorded messages will use the person's natural voice. Newly created messages, using spelling, will use the SGD's artificial voice (i.e. synthesized speech)



What is voice and message banking?

mnda
motor neuron disease
association

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When to voice bank

- Voice and message banking is most successful when speech is clear and easily understood but many people have been successful, even when their voice has changed substantially
- It is important to understand that, depending on the option selected, the process of voice banking and/or Message Banking may take several hours of your time and energy over several days or weeks
- At this time, neither Acapela nor Model Talker support the creation of a synthesized voice from past recordings
 - In this situation, some individuals choose to have a relative or friend record the phrases for them

• Source: <https://teamgleason.org/pals-resource/voice-message-banking/>

The Pros of Voice banking

- By creating a synthetic voice, the person can continue to communicate in a voice approximating their own
 - In addition, the user can type brand-new sentences they've never said before and the speech-generating communication device will “speak” the sentence in their own synthetic voice
 - This means the person doesn't have to record every possible sentence they may want to say.
- The technology is improving
 - It used to take lot more work to digitally capture a voice
 - Now, a synthetic voice can be created with as few as 350 sentences. The process is more robust, meaning that even if someone has a noticeable voice impairment, it may still be possible to develop a decent synthetic copy.

Source: <https://eatspeakthink.com/voice-banking-tutorial/>

The Cons of Voice Banking

- The voice is synthetic, which means while it will sound close to the person's natural voice, it will still sound somewhat artificial
- We don't currently have the technology to replicate emotion and intonation in the synthetic voice
 - Sentences will tend to sound mechanic. The sentence "I love you" will have the same emotional quality as the sentence "I want you to leave."
- The synthetic voice may not necessarily say the names of people and places correctly.
- Source: <https://eatspeakthink.com/voice-banking-tutorial/>

AAC AWARENESS MONTH



MESSAGE & VOICE
BANKING

w/ Dr. Wendy L. Olsen PhD, CCC-SLP

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Why to voice bank

- Data suggest 'preserving identity' is the overarching motivation in decision making for voice banking. Participants who decided to voice bank considered it would help to maintain their identity and preserve their social and work networks
- Professionals have a role to provide people with ALS/MND with more information about voice banking in the wider context of using AAC for communication. It may be that the process of voice banking itself is seen as a positive act for people with ALS/MND, independent of how it is used later. Further research with associated professionals and stakeholders is indicated

– Cave R, Bloch S. Voice banking for people living with motor neurone disease: Views and expectations. *Int J Lang Commun Disord*. 2021 Jan;56(1):116-129. doi: 10.1111/1460-6984.12588. Epub 2020 Dec 22. PMID: 33350040.

The unique role of familiar voices

- The role of voice as a marker of identity is important for not only the speaker but also listeners
- Although voices are all around us, familiar voices are special (e.g. Sidtis & Kreiman, 2012) in their evolutionary value, diffuse neurological representation (Maguinness, Roswadowitz, & von Kriegstein, 2018; McGettigan & others, 2015), and in the unique impact they have on listeners who have a personal relationship to the speaker (Seltzer, Ziegler, & Pollak, 2010)
- Sidtis and Kreiman (2012, p. 154) describe the personal, familiar voice as an “emotional auditory event.”
- Hearing a mother’s voice, even by phone, can be similar in its effect in reducing a daughter’s stress levels (as measured by levels of oxytocin) to having direct physical contact (Seltzer et al., 2010), unlike the impact of instant message contact between mothers and daughters (Seltzer, Prosocki, Ziegler, & Pollak, 2012)
- These findings suggest that the unique features of an individual’s voice help to nurture and sustain social bonds and relationships. Loss of voice, therefore, impacts not only the individual speaker but also has the potential to deprive others of emotional connectedness
- *John Costello & Martine Smith (2021) The BCH message banking process™, voice banking, and double-dipping™, Augmentative and Alternative Communication, 37:4, 241-250, DOI: 10.1080/07434618.2021.2021554 To link to this article: <https://doi.org/10.1080/07434618.2021.2021554>*

A personal process

- Voice/message banking is unique, customized, and personal
- Just as there is no one path to completing the process, there is no single outcome
- All aspects are driven by the unique wishes, personality, needs, and aspirations of the individual who chooses to record and bank messages
- Although there may be many shared experiences and challenges, the impact and meaning of those events are unique
- Banking should offer each individual hope through empowerment, by ensuring from the outset that participating in this process is about taking control
- The process offers a way to make a positive investment in the future, regardless of the losses that may be brought on by the disease, offering an element of the hope that has been highlighted as a key coping mechanism (Freer, 2010)

- *John Costello & Martine Smith (2021) The BCH message banking process™, voice banking, and double-dipping™, Augmentative and Alternative Communication, 37:4, 241-250, DOI: 10.1080/07434618.2021.2021554 To link to this article: <https://doi.org/10.1080/07434618.2021.2021554>*

Equipment and space needed

- Computer
- Internet connection
- Phone/tablet
- Microphone
 - Headset is better than the built in speakers
- A quiet place to record, preferably a small room with carpeting and curtains. If the sound quality isn't good enough, you could place a blanket over a hardwood floor, place a screen around you, or even drape a blanket around you
- Eliminate as much background noise as possible. For instance, turn off the air conditioner and make sure there aren't any ticking clocks. Close the windows and doors. Turn off notifications on your phone
- Record in the same place and with the same equipment each time. Try to record at the same time of day. Also, your speech should be at the same level of loudness, the same rate of speech, and the same "quality" each time

- Source: <https://eatspeakthink.com/voice-banking-tutorial/>

Voice Bank Comparison Table. *February 2021*

	Model Talker	MOV Acapela	Speak Unique	VocalID	Voice Keeper	CereVoice M Cereproc
Process	1575-3000 messages	50 messages. Can add 300 custom if desired	300 messages	1600+ messages	50-500 messages	1000 + me
Time commitment*	5- 7 hours	10- 60 minutes	60- minutes	5-7 hours	15-90+ minutes	Minimum hours
Can add custom script	yes	yes	No	No	No	No
Bank from home	yes	yes	yes	yes	yes	yes
Premier before pay	Yes. TTS	Yes. TTS	Yes (pre-scripted)	Yes. TTS	Yes. TTS	No
Cost USD	100	99 yr or 999.	295.	1500.	250.	640.
Incorporate into SGD	yes	yes	Yes - limited iOS options	Limited options	yes	yes
Can 'double dip' from Message banking	no	yes	yes	no	yes	no
languages	English	16 languages	English	English	English and Hebrew	English
Equipment needed	Headset/computer	Headset/computer	Headset/computer	Headset/computer	Headset/computer Or iPhone	Headset/c
Will accept and process unedited legacy audio	no	Yes, case by case, added fee may apply	yes	no	Yes* website states may be poorer quality	no
Voice repair	no	no	yes	no	no	no



Voice Banking: Samples of voice created by same person using:
Speak Unique (200 phrases)
Voice Keeper (100, 200 & 500 phrases)
Acapela MOV (50 phrases)



JAY S. FISHMAN
ALS AUGMENTATIVE
COMMUNICATION PROGRAM
at Boston Children's Hospital

Based on technology available as of
February 10, 2021



The Voice Keeper
The fastest voice banking service

Message Banking

- Saving a save a digital copy of your voice
- The process involves recording specific words, phrases, and sentences to be played back “as-is” during future conversations using a [speech-generating device](#) (SGD)
- Message banking captures your true voice
- Since these recordings are used as-is, they fully capture your voice with all of its expressiveness and personality. Your voice is such an intimate part of who you are, and message banking allows you to retain and express that self-identity
- Bank as few or as many messages as you’d like
- You can choose to record as few or as many words, phrases, and sentences as you’d like. Even if a person only banks a handful of commonly-said messages, they can be used often in everyday conversation
- There’s no charge at any point in the process
- Using the message banking program developed by John Costello’s team at Boston Children’s Hospital
There’s no charge for using the message banking system, storing your messages, or downloading your messages
- Source: <https://eatspeakthink.com/message-banking-tutorial/>

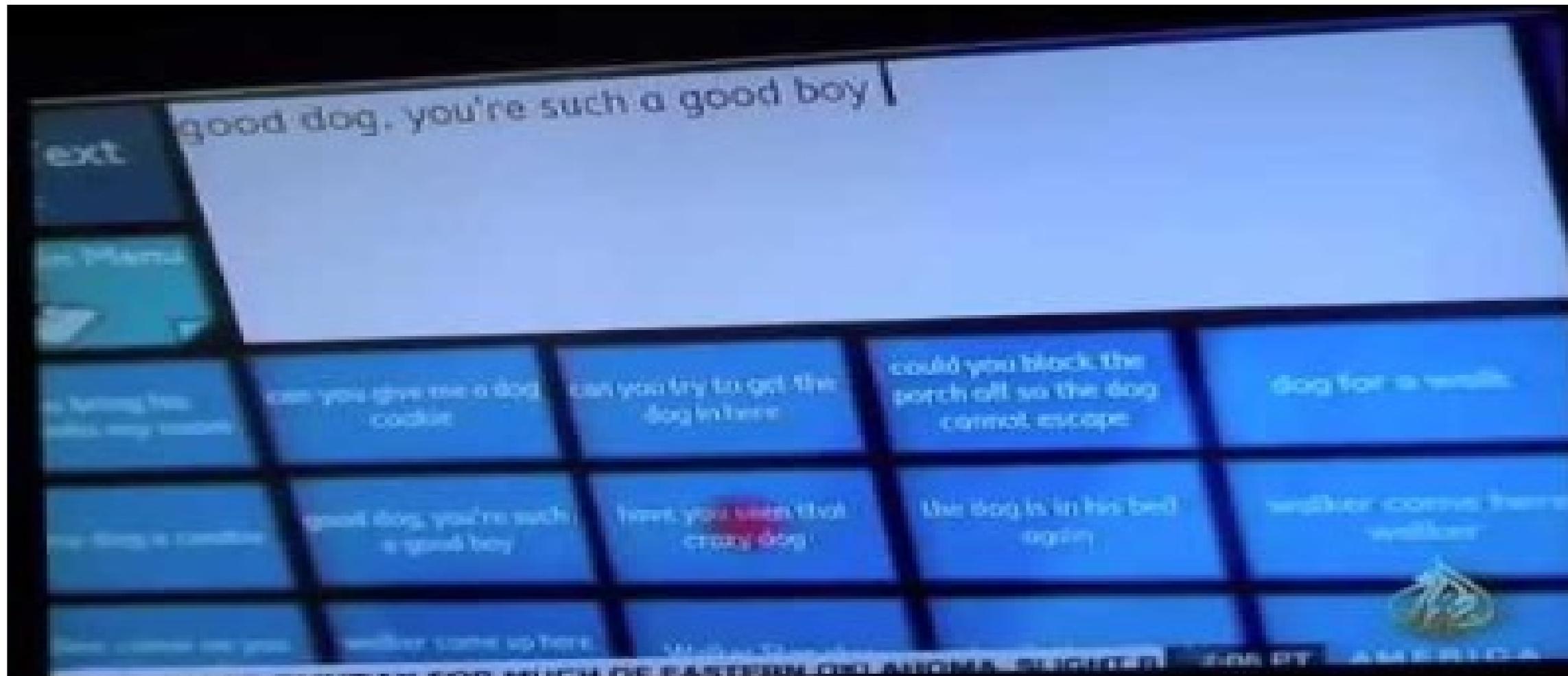
Equipment needed for Message Banking

- Computer with internet access
- Hand-held voice recorder. You should use a good-quality voice recorder that outputs .wav files. The message banking team recommends using the [Zoom H1 recorder](#)
- <https://www.mymessagebanking.com/>
 - The system will guide you through the message banking process, help organize the messages, store the messages until they are needed, and provide ways to download the messages for use on any system that can play back those messages. Use of the system, storing messages and downloading stored messages is free for personal use
 - Source: <https://eatspeakthink.com/message-banking-tutorial/>





Message banking



Double Dipping

- Developed by John Costello at Boston Children's ALS Augmentative Communication Program, **Double Dipping** is a way to use your message banked messages to create a synthetic voice with Acapela
- You can use your energy to capture banked messages that you will really want to have available and then those messages can be used to create a synthetic voice
 - If one banks 800 or more good quality messages following the BCH Message Banking™ process, those may be used instead of needing to record scripted sentences into your computer. Both your banked messages and your Acapela synthetic voice may be used together in your SGD
 - Source: teamgleason.org

Example of Double Dipping



Boston
Children's
Hospital
ALS Augmentative
Communication
Program

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I Will Always Be Me – UK only (hopefully coming to the US?)



Getting help

- Your local ALS Chapter
- Team Gleason
 - www.teamgleason.org
- Bridging Voice
 - www.bridgingvoice.org
- Tutorial: <https://eatspeakthink.com/voice-banking-tutorial/>

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