VoiceShell

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COLLABORATORS

	TITLE :		
	VoiceShell		
ACTION	*NAME*	*DATE*	*SIGNATURE*
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REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

Contents

Chapter 1

VoiceShell

1.1 VoiceShell table of contents

22/07-93 VoiceShell V1.11

Table of contents

1.2   Contents of archive

Contents of archive

This archive must include the following files:

File Description

VoiceShell/VoiceShell - the program itself

VoiceShell/VoiceShell.info - the program icon

VoiceShell/VoiceShell.guide - program documents (this file)

VoiceShell/VoiceShell.guide.info - icon file

VoiceShell/Libs/voice.library - library file

VoiceShell/Scripts/VSOn - script file

VoiceShell/Scripts/VSOff - script file

VoiceShell/Scripts.info - icon file

VoiceShell.info - icon file

Install - install script

Install.info - icon file

ReadMe - read this file first

ReadMe.info - icon file

1.3   Document version

DOCUMENT VERSIONS

Updated: 13/02-93 - for version 1.01

Updated: 14/02-93 - for version 1.02

Updated: 31/05-93 - for version 1.05

Updated: 02/06-93 - for version 1.06

Updated: 10/06-93 - for version 1.07

Updated: 19/06-93 - for version 1.08

Updated: 22/06-93 - for version 1.11

1.4   Copyright information

COPYRIGHT INFORMATION

Copyright (C) Tomi Blinnikka 1993, All Rights Reserved.

This program is . This means that you can copy it and give it

to all your friends, upload it to a BBS or include it in a PD-library

(FISH, Walnut Creek CDROMS etc.). BUT (!!!) if you use this program

frequently you must pay $5 - $10. The other restrictions are: all of

the files must be included in their original form without additions,

deletions, or modifications of any kind and it IS NOT TO BE SOLD. THIS

INCLUDES GERMAN PD DEALERS. If you wish to use this program for commercial

purposes, you need written permission. The VoiceShell program is

provided "AS IS" without warranty of any kind, and the is not

responsible for any damage this software may or may not do.

1.5   Basics about VoiceShell

WHAT DOES IT DO?

This program is a 'replacement' for VCLI. It doesn't have the fancy

graphics etc. but it seems to eat less CPU time and should be faster

overall. It also has some extra options.

So what is VCLI I hear you ask. VCLI is a program by Richard Horne

that uses his voice.library for recognizing speech. With VCLI

and VoiceShell you can start programs by saying the program's name. You

can VoiceShell 60 (VCLI allows 48) different words. You also

have the possibility to load a new set of words, thus giving limitless

possibilities. The more words you , the less accurate

the result will be. Thus having more than one data file might be

a good idea.

1.6   What is needed to use VoiceShell

WHAT DO YOU NEED?

You'll need an Amiga computer (see list), with Kickstart

2.04 (intuition.library and gadtools.library version 37 or higher). You'll

also need voice.library version 8.2 or higher and a sampler (see

list).

An accellerated Amiga (MC68020 or higher) is recommended for continuous

usage.

1.7   What VoiceShell run on

COMPATIBILITY

VoiceShell will work on any Commodore-Amiga, running on Kickstart

2.04 or higher. This includes the following: A500(+), A600, A1000, A1200,

A2000, A2500/20, A2500/30, A3000/16, A3000/25, A4000/40, A4000/30. The

program SHOULD work on any upgrades (based on the Amiga Development

Guidelines, see Amiga ROM Kernel Reference Manual (Kickstart 1.3

version): Libraries and Devices, introduction).

VoiceShell works with the following samplers:

PerfectSound

AudioMaster

GVP DSS 8

Generic samplers (inc. most homemade samplers)

NOTE! Most samplers will work with the generic sampler .

1.8   Starting VoiceShell from a CLI/Shell

STARTING FROM CLI/SHELL

You can start the program from both CLI/SHELL/etc. and .

To run the program, enter the following into your CLI/SHELL/etc.

1> VoiceShell FROM/K,I=ICONIFY/S

Where: ICONIFY iconifies program when run. The window won't

be activated. Use 'I' as an abbreviation.

FROM allows you to specify the file (not the data

file).

Along with the GUI, you can also use the Break command or CTRL-C to quit

the program. CTRL-D will turn VoiceShell off (disable), and CTRL-E will

turn it back on (enable). You may also use ARexx commands to control

the program.

You can also add this line into your S:User-StartUp to run the program when

the machine is booted.

RUN >NIL: VoiceShell

You may want to add the ICONIFY option ...

RUN >NIL: VoiceShell ICONIFY

... to iconify the window, when the program starts.

1.9   wbstart

STARTING FROM WORKBENCH

From the Workbench, start the program like any other, by double-clicking on

its icon. If, however, you would like to specify the file or

iconification, use the tool types. This is done by clicking once on the icon

and selecting 'Information...' from the 'Icons' menu in the Workbench. Then

change the tool types accordingly (please refer to user manual, if needed).

Please take care with upper- and lowercase letters! The inputs ARE case-

sensitive. If you would like the program to run on every boot, move

VoiceShell into the 'WBStartUp' drawer. If you do this, don't forget to add

the tool type 'DONOTWAIT' (this applies to almost every program...). Below

is a list of available tool types and there usage:

TOOL TYPE VALUE

FROM <filename>

ICONIFY YES

DONOTWAIT <NONE> (add only if program is in the 'WBStartUp' drawer)

Examples:

FROM=ENV:VoiceShell.PREFS2

ICONIFY=NO

or

FROM=Work:VoiceShell/VS.PREFS

ICONFIY=YES

1.10 Description of main window

MAIN WINDOW

The main window has several , From the checkbox

(On/Off), you can specify whether or not to listen to speech. When

VoiceShell is off it will eat hardly any CPU time.

The string gadget 'Data file' holds the name of the data file which has

the commands to be run and the speech samples.

The 'Vol Up' and 'Vol Dwn' are only active when a PerfectSound or DSS 8

sampler is used. With these two gadgets you can set the input gain of the

sampler. Please refer to your samplers manual for more information. NOTE!

The PerfectSound sampler will roll over from its maximum value to zero and

from zero to its maximum value. The GVP DSS8 doesn't have this 'feature'.

If the GVP DSS8 is being used, you can see the current gain setting next

to the 'Vol Dwn' gadget.

The other button gadgets either 'Save' the (window place,

gadget settings etc.) and the data file or 'Quit' the program. These two

may also be selected from the . The last one, 'Load' will load ONLY

the data file . NOTE! The 'Load' menuitem will load the AND data file !

The window has a Kickstart 2.04 Zoom gadget. When you click on this the

window will go into its iconified state. Clicking on it again will open it

up.

1.11   menus

MENUS

Project:

Load - Loads the (ENVARC:VoiceShell.PREFS or

file specified on startup) AND the data file .

Save - Save the and date file.

About... - Gives some info on the program.

~~~~~~~~

Quit - Quit program (NOTE! The and

data file are not saved!).

Commands:

Edit/Learn - Allows you to VoiceShell the commands

to recognize. You can also change the command

without re-sampling. When you select this a

window will open. In this window there are two

columns of . The first column is

the description of the command to learn. The

second contains the command and its arguments

to execute. Pressing return in any of the

gadgets in the first column (Description)

will cause VoiceShell to start learning the

commands. Pressing return in the second column

(Command to run) will only update the command to

run.

Setup:

Sampler - Allows you to set specify the type of sampler you

have. If your sampler isn't mentioned, choose

Generic.

Resolution - Sets the accuracy of the samples. Low uses less

CPU time than High, but is less accurate.

Accuracy - Allows you to set how accurate the spoken words

have to be. Set to a low value if you have extra

background noise.

Channel - Allows you to select either the left or right

channel to sample from. ALL BUT GENERIC.

Input - Allows you to set the input level, line or

microphone. ALL BUT GENERIC.

CIA timer - Specifies the CIA timer to use. Other programs

may use one or the other (especially music module

players/editors).

Priority... - This sets the priority of the task that

recognizes speech.

1.12   gadgets

GADGETS

- Checkboxes

On/Off - Try to recognize speech? When this is off

VoiceShell won't use much CPU processing time.

- String gadgets

Data file - Path and name of the data file .

- Button gadgets

Vol Up - Increase the input gain. PerfectSound and GVP

DSS 8 only.

Vol Dwn - Decrease the input gain. PerfectSound and GVP

DSS 8 only.

Load - Load only the data file specified in the 'Data

file' gadget.

Save - Save the and data file .

Quit - Quit program (NOTE! The and

data file are not saved!).

1.13   How to teach words

LEARNING WORDS

Select Edit/Learn from the to start learning new words. First

type in the description for the word to be taught and press return. This

will bring up the sampling window. Press 'Sample' to start learning this

word and say the word. If the requester suggests you should accept, the

input volume was fine and you may press the 'Accept' button. You are asked

to do this three times. After the word has been taught, you are prompted to

enter the command to be run when this word is recognized. Repeat the procedure

for all the commands you wish to teach.

Pressing return in the first column will ALWAYS open the sampling window.

Be careful not to accidently press return in the first column if you are

editing the commands to be run and not the samples themselves. Pressing

TAB in the first column will also start the sampler.

When the sampler window is open you will see two or four gadgets depending

on your sampler setup. A short description follows:

Sample - Start sampling. The program will wait for input

before starting.

Accept - Accept the previous sample and get the next one.

Volume Up - Turn the input gain up. PerfectSound and GVP DSS 8

only.

Volume Down - Turn the input gain down. PerfectSound and GVP

DSS 8 only.

Closing the window with the window's close gadget will abort sampling, but

destroy any previous sample.

You are asked to give 3 (three) good samples. These will be later used

to recognize the word. See 'Hints & Tips' for some tips on teaching words.

After three samples have been given the window will be closed and you can

now enter the command to be run when this word is recognized. The command

run will use the same input/output as VoiceShell unless it is

redirected (><NIL: for example).

As mentioned earlier, you can teach VoiceShell 60 words. In the

window however, there are only twenty gadgets (10 for descriptions and 10

for the commands and arguments), use the menus to select which set of

words to Edit/Learn.

1.14   Preferences and data file

PREFERENCES & DATA FILE

When you select 'Save', either from the or by clicking on the gadget,

VoiceShell will save all settings into a file called VoiceShell.PREFS, or

the file specified with the FROM option on startup. It will be saved onto

the assigned device ENVARC: where other system preferences are stored. It

however, is not an IFF file. This is to save space, in both code size and

disk space. The data file will also be saved to the file specified in the

'Data file' string gadget.

The window place will also be saved. If the Window was zoomed when 'Save'

was chosen, the program will not however, zoom the window when the

preferences are loaded or the program is started. On startup you must

specify the option.

1.15   ARexx commands

AREXX COMMANDS

VoiceShell can be controlled via ARexx. VoiceShell has an

ARexx port with the name 'VOICESHELL'. By sending ARexx messages to

this port you have almost full control over VoiceShell.

Examples:

To control VoiceShell via arexx you may use the shell command RX.

It is possible to control the program from an ARexx script or straight from

the command line.

SYS:REXXC/RX "ADDRESS VOICESHELL COMMAND"

To load a prefs file named 'S:VoiceShell.PREFS2':

SYS:REXXC/RX "ADDRESS VOICESHELL 'LOAD S:VoiceShell.PREFS2'"

NOTE the double and single quotes. VoiceShell treats anything

after the keyword 'LOAD ' (including a space) as a filename.

NOTE WELL! Sending ARexx commands to VoiceShell from ITSELF

will cause a LOCK UP in VoiceShell. This will not affect other

programs, but you won't be able to quit VoiceShell. If you wish to

send ARexx commands to VoiceShell from itself, YOU MUST USE THE

'RUN' COMMAND!

For more detailed information on using the ARexx language, please refer to

your user manuals.

Please see the and for more

detailed explanations on the following functions.

VoiceShell supports the following commands:

AREXX COMMAND RESULT

Window:

FRONT The main window is brought in front of all

others.

BACK The main window is put behind all others.

ZOOM Zooms (zips) the window, i.e. iconifies &

un-iconifies the main window.

Project:

LOAD FILENAME Loads FILENAME as a preferences file and the

data file set by these preferences.

ON Adds the VoiceTask. Start recognizing.

OFF Removes the VoiceTask (eats less CPU).

Stop recognizing.

QUIT Quits VoiceShell.

Sampler:

PERFSND Use the Perfect Sound sampler.

SNDMSTR Use the Sound Master sampler.

DSS8 Use the GVP DSS 8 sampler.

GENERIC Use the generic sampler.

Resolution:

RESLO Set high resolution.

RESHI Set low resolution.

Accuracy:

LOWEST Set accuracy level.

LOWER Set accuracy level.

LOW Set accuracy level.

NORMAL Set accuracy level.

HIGH Set accuracy level.

HIGHER Set accuracy level.

EVENHIGHER Set accuracy level.

MAXIMUM Set accuracy level.

Input channel:

LEFT Listen to the left channel.

RIGHT Listen to the right channel.

Input gain:

LINE Set line input gain

MIC Set microphone input gain.

GAINUP Increase volume.

GAINDOWN Decrease volume.

Timer:

TIMERA Set CIA timer A.

TIMERB Set CIA timer B.

1.16 Multiple users

MULTIPLE USERS

Because everybody has their own way of pronouncing words and simply because

people have different voices, VoiceShell probably won't understand

words said by person A, when person B has the words. In order to get

around this problem, all the users must teach VoiceShell to understand

their own voice and to save their personal files.

With a simple startup script for each user, multiple users can use

VoiceShell on a single machine.

1.17 Hints & Tips

HINTS & TIPS

1. When words, take the first sample a few times before

accepting it. This way you can see what the waveform is supposed to look

like and you'll get a cleaner sample. This increases accuracy when

recognizing.

2. To load a new prefrence file by speech, teach VoiceShell the

word and use the following as the CLI command:

RUN SYS:REXXC/RX "ADDRESS VOICESHELL 'LOAD FILENAME'"

VoiceShell will then send itself an ARexx message telling itself to load

the file 'FILENAME'.

NOTE! You must use the 'RUN' command when sending ARexx message from

VoiceShell to itself. See the section on ARexx commands

for more information.

1.18   Example scripts to use with VoiceShell

EXAMPLES

Here we have some example scripts to use with VoiceShell. The first one

will disable VoiceShell by sending a CTRL-D to the program and the second

one will enable VoiceShell.

NOTE! These two DO NOT WORK when VoiceShell is loaded from .

;Example 1, turn VoiceShell off

;---CUT---

Break `Status COM=VoiceShell` d

;---CUT---

;Example 2, turn VoiceShell on

;---CUT---

Break `Status COM=VoiceShell` e

;---CUT---

ARexx versions of these two scripts can be found in the VoiceShell/Scripts

directory (they are not real ARexx scripts, but instead use the 'RX' command

to send ARexx messages to VoiceShell.

1.19   Possible problems that You might encounter

PROBLEMS

There can only be one voice.library open. If you try to run another copy

VoiceShell along with itself or VCLI/AniMan you will receive an error

message.

1.20   Error messages displayed by VoiceShell

ERROR MESSAGES

The VoiceShell program will display necessary error messages. If a window

can't be opened, the user will be informed. If a PublicScreen cannot be

locked, the user will informed etc. I HATE PROGRAMS THAT DON'T TELL

WHAT-THE-HELL IS GOING ON! That clear? If VoiceShell doesn't give any

output, output has been redirected to NIL: etc. Another case might be when

VoiceShell has been started from Workbench. If nothing happens try

starting it from a Shell.

1.21   Known bugs

BUGS

No known bugs at the moment. VoiceShell has been run with enforcer &

mungwall and nothing was found.

1.22   List of versions and changes

VERSIONS

Version Size Date Description

1.11 21664 22/07/93 Implemented ARexx 'LOAD' command. Bugs fixed.

Added Install script.

1.10 ~21000 17/07/93 Slightly optimized. Bugs added (Vol Up/Dwn may

crash).

1.09 ~22000 21/06/93 Added ARexx control.

1.08 20000 19/06/93 Searched for bug, but it was in the library.

Version number bumped.

1.07 20000 10/06/93 Fixed stuff in Left/Right & Mic/Line selection.

1.06 19932 02/06/93 Added selection for Left/Right & Mic/Line.

Added misc stuff.

Fixed a few bugs.

1.05 18792 30/05/93 Set priority to 120 on startup and resets

it to 0 when quit. Fixed some bugs.

Added Accuracy, shows DSS gain.

1.04 ????? 25/05/93 Added support for GVP DSS8. Needs voice.lib

version 7.1 or higher.

1.03 ????? 18/05/93 Fixed some font stuff.

1.02 15664 14/02/93 Added 'Load' gadget to load only the data

file.

1.01 15588 11/02/93 Name changed from VShell to VoiceShell so it

won't get mixed up with VisualShell or

whatever it is.. :). Fixed a bug in the load

routine. VS would load the wrong data file on

startup.

1.00 ~15000 07/02/93 Changed parser. From option, generic sampler,

timer added. Lotsa bugs fixed.

0.00a- ???? ??/??/92 Wrote the program basics and main routines.

0.99a

1.23   Future versions and ideas for them

FUTURE VERSIONS

Future version will have the bug fixes for the bugs I haven't found. The

ARexx mentioned in earlier versions has been implemented, what else do you

need? :)

1.24   VoiceShell shareware fee

SHAREWARE FEE

As of version 1.01 VoiceShell is ShareWare. I am not asking for a huge

amount of money, so I hope I will get some response. The fee is only $5 to

$10 (USD), or whatever that happens to make at the moment you're reading

this, in german marks (DM). If you're from Finland a sum of 20 FIM to 50

FIM is great (Yeah, so what if I changed the $10 to $12 ? You Finnish guys

don't have to pay so much for postage :)

1.25   Contacting the author

CONTACTING THE AUTHOR

Please send donations, bug reports, and list of features you would like to

have included in future versions to

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"...trademark of Xerox Corporations. Reading legal mush can turn your

brain to guacamole! Epson is registered trademark of Epson America

..." -Amiga RKRM Includes & AutoDocs, fourth page.

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