

Dragon NaturallySpeaking

Version 9

Training Guide

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Disabled Student Programs & Services

Butte College

Spring 2009

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Dragon NaturallySpeaking v. 9

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Background Information Dragon NaturallySpeaking (DNS), Version 9

➤ **BACKGROUND: What it offers**

- ✓ Source: Nuance.com
- ✓ Dragon NaturallySpeaking is a large-vocabulary speech recognition system
 - Speaker-dependent: individual user files
 - Understands *continuous* speech
- ✓ Allows user to:
 - Dictate and edit text
 - Control the computer
 - *Examples:* menus, dialog boxes, navigating the Internet
 - Review dictation:
 - Hear onscreen text read aloud
 - Play back recording of user's dictation

➤ **APPLICATION: How it can be used**

- ✓ Moderate to severe physical disabilities that impact keyboard access
 - Additional training may be required to recognize the user's specific speech pattern in such cases as cerebral palsy
- ✓ Repetitive strain injury
- ✓ Learning disabilities (*Example:* dyslexia)
 - May be helped by being able to dictate text and then confirm it on the screen
 - Caution: These users may also have difficulty accurately confirming the DNS interpretation of what was dictated

Background

➤ GENERAL RECOMMENDATIONS

✓ Consistent speech

- *Example:* Speech that doesn't change the next day

✓ Clear pronunciation

- *Example:* Does not need to be “standard” pronunciation, but needs to “hit” the specific articulation targets

✓ Strong memory for details

- *Example:* When making corrections, need to reason through whether it is actually a misrecognition error
- *Example:* It is best to be consistent in use of commands; would not want to use different commands for same result (“*Go to bottom*” & “*Move to bottom*”)

✓ Adequate breath support

✓ Patience

✓ Basic familiarity with computers

- *Example:* Understanding such concepts as active/inactive window

➤ TIPS FOR DICTATING

✓ Pronounce each word clearly—even short words

- *Example:* “*Go to bottom*” – don't slide over the “t” in “to”

✓ Set up system prior to dictating, checking for:

- Consistent microphone placement
- Sound volume & quality

✓ Speak all punctuation

✓ Commands:

- Pause before and after saying commands
- Say commands smoothly without pausing between words

✓ Maintain your *natural* way of speaking – don't over-enunciate

✓ Dictate 1-2 sentences at a time; then go back and make corrections

✓ Drink water; sipping through a flex-straw will maintain headset position

Background

➤ MODES

✓ DNS has five different modes:

MODE	FUNCTION
Normal mode	Recognizes everything (<i>Default</i>)
Numbers mode	Recognizes only numbers, commands, punctuation
Spell mode	Recognizes only letters, numbers, commands, punctuation
Command mode	Recognizes only commands
Dictation mode	Recognizes only words in its dictation vocabulary, plus a few commands (e.g., <i>New Line</i>)

To switch modes, say:

- “Switch to _____ Mode”
- OR: Use **Words** menu on DragonBar

➤ DETAILS OF THE SYSTEM

✓ *Vocabulary*

- NaturallySpeaking has a large active vocabulary
 - Approximately 160,000 words in its active dictionary
 - Speech models for these words are already stored in the system
 - NaturallySpeaking learns & stores the user's pronunciation of these words
- The user can define additional words
 - *Example:* proper nouns, specialized vocabulary

Background

✓ *Proofreading options*

- Plays back recording of user's dictation
 - User can play back selected text or entire document
- Reads onscreen text aloud

✓ *Artificial Intelligence*

- NaturallySpeaking continually learns and stores the individual's speech patterns when the user makes a correction.
- Generalization:
 - NaturallySpeaking generalizes sound patterns from one context to another.
 - In this way, it can recognize a word not previously trained by the user. (*Example: You say ate, Dragon produces aid; in the future, DNS may replace a "t" with "d."*)

✓ *Speed*

- NaturallySpeaking recognizes continuous speech
 - No pause between utterances is required
 - Pronunciation should be as precise as possible
- Text can be dictated at 100+ wpm

✓ *Mainstream Applications*

- NaturalWord feature of NaturallySpeaking allows user to dictate directly into such applications as Microsoft Word, Excel

✓ *Hardware Recommendations (at this time)*

- CPU: 1 GHz processor (the faster the better)
- Memory: *In general, the more the better*
512 MB RAM for Windows
2 GB for Vista
- Windows No Mac version

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Training Dragon NaturallySpeaking

➤ **Suggestions:**

- Take the time to adjust chair to comfortable position
 - Then adjust desk height
- Drink water to keep mouth from getting dry
 - Use flex-type straw to avoid moving microphone

➤ **Launching:**

1. On the desktop, double-click **Dragon NaturallySpeaking (DNS)**

2. **KEYBOARD:**

- Press **Windows** key
- **Start** > **Up Arrow** key to **Programs**
- Press **Right Arrow** key for submenu
- In submenu, press **Down Arrow** key to **Dragon NaturallySpeaking**
- Press **Right Arrow** key for 2nd submenu
- Press **Down Arrow** key to **Dragon NaturallySpeaking**
- Press **Enter**

➤ **Training:**

1. Click **NaturallySpeaking** on DragonBar
2. Click **Open User**
3. Click **New**

4. In **New User** window:

- Type your name
- Click **Next**
- This creates a vocabulary for you

5. Check equipment

- Position your microphone
 - **Important–be consistent**
 - Should be approximately ½ - 1” in front of corner of mouth
 - Click **Next**
- Adjust your microphone: Volume Check
 - Click **Start Volume Check** and read text on screen
 - Click **Next** at “Finished” message
- Adjust your microphone: Quality Check
 - Click **Start Quality Check** and read text on screen
 - Click **Next** at “Audio quality check: PASSED” message

6. Set up training

- Click **Go**
- Read two statements:
 - “Welcome to general training”
 - “Training is about to begin”
- Choose an easy reading piece
 - Suggestion: “Talking to Your Computer”
- Click **OK**

7. Train Dragon NaturallySpeaking

- Click **Pause** at first screen of text, then click **Go** when ready
- Read naturally and accurately – do not try to read too fast
- Click **Pause** or **Redo** as needed, then click **Go** to resume training
- You will read approximately 15 paragraphs/screens of text

8. Click **OK** at “Congratulations!” message
 - DNS will adapt your user files to its speech model
 - DNS will save your user files

9. **Adapting User Files – additional option**
 - You can submit files from email or a document

 - DNS can use this information to better understand your word choice; this will improve its accuracy in recognizing what you say

 - OPTION:
 - Checkmark the message saying not to use this option in the future

 - Click to Begin Dictating & click Finish

➤ **Exiting:**

1. Click **NaturallySpeaking** on DragonBar > **Exit**

Loading User Files & Testing Equipment

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Loading User Files & Testing Your Equipment Dragon NaturallySpeaking

➤ Loading User Files:

1. Launch Dragon NaturallySpeaking
2. Open User dialog box:
 - Click your name to select it
 - Click **Open**

➤ Testing Your Equipment:

1. Two general tips to optimize DNS use:
 - If the computer has been used for other programs—or if it has been on awhile without active use—shut it down (turn it off), before launching Dragon NaturallySpeaking.
 - Test your equipment every time you use Dragon NaturallySpeaking.
2. Testing the equipment:
 - Use the Accuracy Center to check your audio system
 - **Tools > Accuracy Center > Check your audio settings**
 - Check microphone position and click **Next**
 - Click **Start Volume Check** & read onscreen text until you see “*Finished*” message. Click **Next**
 - Click **Start Quality Check** & read onscreen text until you see “*Audio quality check: PASSED*” message. Click **Finish**, then click **Exit**

Loading User Files & Testing Equipment

➤ **Microphone Options:**

- **Options:**
 - **Off: Horizontal**
 - **On: Vertical**
 - **Asleep: Diagonal**

- **Sequence:**
 1. Click **Microphone** to turn it on (ON)
 2. Say “*Stop listening*” to put it to sleep (ASLEEP)
 3. Say “*Wake up*” to wake it up (ON)

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DragonBar
Dragon NaturallySpeaking



Item	Main Functions
Dragon icon	Controls placement of DragonBar
Microphone	Displays microphone status <ul style="list-style-type: none"> • Off • On • Asleep
NaturallySpeaking	Controls users, vocabularies Saves current user file Exits DNS
Tools	Accuracy Center Controls commands
Words	Options for different dictation modes, depending on vocabulary Sets mode: <ul style="list-style-type: none"> • Normal • Dictation • Command • Numbers • Spell
Sound	Play that back (recording of own voice) Read that (DNS reads text aloud)
Help	Help topics Tutorial
Text box	DNS communicates with user

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Using Sound Feedback Options Dragon NaturallySpeaking

- **Dragon NaturallySpeaking offers two options to review your dictation:**
 - ✓ **Play That Back**
 - ✓ **Read That**

- **Play That Back**
 - ✓ **Background:**
 - Reads actual recording of your voice during dictation
 - Lets you hear exactly what you said & how you pronounced the words
 - Helps distinguish between misrecognition error (DNS error) & mispronunciation (user error)
 - ✓ **Steps:**
 - Position cursor at beginning of document
 - **Sound > Play That Back**
 - Listen to hear your voice as you dictated text

- **Read That**
 - ✓ **Background:**
 - Reads onscreen text aloud
 - Uses computer voice
 - ✓ **Steps:**
 - Select text you want to have read aloud
 - **Sound > Read That**
 - Listen to hear document read aloud

Making Corrections Dragon NaturallySpeaking

DNS recognized what you said

DNS misrecognized what you said

RESULT: You want
to CHANGE
WORDING

RESULT: You need
to TRAIN DNS

ACTION:
Select &
Say

CASE #1: Your
word is in the
Correction menu

CASE #2: Your
word is NOT in
the Correction
menu

1
Select the text
("Select ____")

ACTION: Select
& Quick Correct

ACTION: Select
& spell

2
Dictate new wording

1
Select the text
("Select ____")

1
Select the text
("Select ____")

2
"Choose ____" (number
next to correct text)

2
"Spell that" & spell
new text

3
"Choose ____" (number
next to correct text)

Making Corrections

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Making Corrections Dragon NaturallySpeaking

➤ **DNS learns when you make corrections**

- **This increases recognition accuracy**

➤ **Two main kinds of corrections:**

- (1) Dragon recognized what you said – you want to CHANGE WORDING
- (2) Dragon misrecognized what you said – you need to TRAIN DRAGON

Situation (1): DNS recognized what you said; you want to change wording

Action: Select the text you want to change: “*Select _____*”
Dictate the new wording

Example: You change wording from November to December
“*I would like to meet with you in November.*”
“*Select November*”
“*December*”

Situation (2): DNS misrecognized what you said

You have the opportunity to TRAIN DNS—result will be improved accuracy

Two possibilities:

Action: In either case, you first select the text you want to change:
“*Select _____*”

You will see the **Correction menu**

- If the word(s) you want appear on the list, say “*Choose + the number next to the correct text*”
- If the word(s) you want do not appear on the list, say “*Spell That,*” then spell the new text letter by letter

Making Corrections

➤ Making corrections:

- Once you select text, you can correct it by:
 - Typing correct text
 - Dictating correct text
 - Use choices in Correction menu
- DNS keeps track of all corrections you make, whether you type, dictate, or use the Correction menu.
- DNS keeps track of the corrections you make and adapts your user files accordingly when you save user files.

➤ Correction menu options:

- “*Spell That:*” You spell desired text
- “*Play That Back:*” Plays recording of your voice
- “*Cap That:*” Capitalizes first letter of text
- “*Unselect That:*” Closes selection & closes Correction menu
- “*Choose ___ “ (item number in menu):* Replaces text with that item
- Select-and-Say feature: Select item & say the correct text

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Saving User Files to Flash Drive **Dragon NaturallySpeaking**

NOTE: Dragon will allow you to export your user files to a new location, including a network directory.

NOTE: When you export a user, any custom words you have added to a [local roaming user](#) will not accompany the user files. You need to first run [Add Words from Document](#) in the [Accuracy Center](#).

➤ **STEPS: Exporting user files**

1. Put flash drive into USB port
2. Launch DNS and open your user files
3. Click **NaturallySpeaking > Manage Users**
4. Select your name
5. Click **Advanced**
6. Click **Export**
7. Use **Browse For Folder** dialog box to locate destination disk
8. Select destination disk & click **OK**
9. Click **OK** at message that export has been completed successfully

➤ **STEPS: Importing user files**

1. Put flash drive into USB port
2. Launch DNS and open your user files
3. Click **NaturallySpeaking > Manage Users**
4. Select your name and click **Advanced > Import**
5. Use **Browse For Folder** dialog box to locate your user files
6. Select your name & click **OK**
7. Complete the Audio Setup Wizard: Volume & Audio Quality Check

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Navigating Dragon NaturallySpeaking

NOTES:

- ✓ **Be consistent in the wording you choose**
 - *Example:* Don't switch between "Move to Bottom" and "Go to Bottom"
- ✓ When navigating to a specific target, start with an approximate number, then fine tune as you get closer.

➤ **General Navigating:**

<u>To move to:</u>	<u>Say:</u>
Top of screen	"Page Up"
Bottom of screen	"Page Down"
Top of document	"Move / Go to Top" "Move / Go to Top of Document" "Move / Go to Beginning of Document"
Bottom of document	"Move / Go to Bottom" "Move / Go to Bottom of Document" "Move / Go to End of Document"
Beginning of line	"Move / Go to Beginning of Line"
End of line	"Move / Go to End of Line"

➤ **Moving by paragraphs, lines:**

“Move / Go + Up/Down” + “1 . . .20 Paragraphs”
“1 . . .20 Lines”

➤ **Moving by words, characters:**

“Move / Go + Right/Left” + “1 . . .20 Words”
“1 . . .20 Characters”

➤ **Moving insertion point to specific word:**

To move: _____ **Say:**

Before word

“Insert Before (+ word)”

After word

“Insert After (+ word)”

Select, Cut, Copy, Paste, Delete

➤ Cutting, Copying, Pasting text:

1. Select text (according to above instructions)
2. “*Cut That*” or “*Copy That*”
3. Move cursor to new position
4. “*Paste That*”

➤ Deleting text:

1. Select text (according to above instructions)
2. “*Delete That*”

Scratch That:

Deletes last utterance

An “utterance” is a group of words spoken together without pause

Can say “*Scratch That*” up to 10 times

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Formatting Dragon NaturallySpeaking

➤ Formatting commands let you:

- ✓ Capitalize text
- ✓ Format text – several options:
 - Bold, underline, italicize text
 - Change font face and size
 - Apply other formatting

You need to select the text before making a formatting change (except when you are dictating)

NOTE: Most of these commands work in a variety of applications.

➤ Capitalizing text

✓ Capitalizing text AS YOU DICTATE:

- Next word:
Say “**Cap**” before saying the word
- Consecutive words:
Say “**Caps On**” before saying the text
After dictating the text, say “**Caps Off**”
DNS will capitalize appropriate words in a title

Example: “Caps On” “The Sun Also Rises” “Caps Off”

- All letters in a single word:
Say “**All Caps**” before saying the text
Example: Meet me “All Caps” PROMPTLY

- All letters in a phrase:
Say “**All Caps On**” before saying the text
After dictating the text, say “**All Caps Off**”
Example: “All Caps On” “THE MEETING WILL BEGIN AT 11:00 SHARP” “All Caps Off”

Formatting

✓ To force lowercase letters:

Say “*No Caps*” before saying a word

Say “*No Caps On*” before dictating longer text you want to appear in lowercase, then say “*No Caps Off*” following the text

✓ Capitalizing / uncapitalizing AFTER text is dictated:

Select text

Say:

- “*Cap That*” or “*Capitalize That*”
- “*All Caps That*”
- “*Uncap That*” or “*Uncapitalize That*”
- “*No Caps That*”

➤ **Formatting text**

✓ Changing fonts AS YOU DICTATE:

Say “*Set Font*” and then say font attributes you want

- Font face
 - *Example: “Set Font Times New Roman”*
- Font size
 - *Example: Set Font 12”*
- Font style
 - *Example: “Set Font bold”*

Formatting

- ✓ Changing format AFTER text is dictated:

Select text

Once text is selected, change format according to what you want:

- To change font face and size:

Say “***Format That***” and then say attributes

Example: “*Format That Arial*” then “*Format That Size 12*”

- To change font style:

Say “***Bold That***” / “***Italicize That***” / “***Underline That***”

- To change alignment:

Say “***Center That***” / “***Left Align That***” / “***Right Align That***”

- To add bullets:

Say “***Format That Bullet Style***”

- To change colors:

Say “***Color that blue***”

Text will be blue

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Numbers and Punctuation¹ Dragon NaturallySpeaking

➤ Dictating numbers:

- For single numbers:
 - ✓ Say the number
 - ✓ *Example:* “Five” DNS will type either “5” or “five,” depending on context
 - ✓ To force a numeral, say “*Numeral 2*” (or 3, 4 . . . 0)
 - ✓ *NOTE:* You can say “and” as part of a number
 - *Example:* three hundred and fifteen

- To dictate only numbers:
 - ✓ Say “*Start Numbers Mode,*” then dictate the numbers and special characters (e.g., copyright mark)
 - ✓ When finished, say “*Stop Numbers Mode*”
 - ✓ This is useful when using a spreadsheet program.

- Commas and decimal points:
 - ✓ Say “*Comma*” to insert comma in string of numbers
 - ✓ NOTE: In numbers of 5 or more digits, DNS will insert commas

 - ✓ Say “*Point*” for decimal point

 - ✓ (For examples, refer to attached table from DNS manual)

¹ Newman, Dan. *User’s Guide, Dragon NaturallySpeaking 6*. Lernout & Hauspie: 2001. pp. 63-84

Numbers & Punctuation

➤ Dates:

- ✓ Dictate most dates the way they should appear: “*April 24, 2002*”
- ✓ (For examples, refer to attached table from DNS manual)

➤ Time:

- ✓ Dictate time of day the way you normally say it
- ✓ (For examples, refer to attached table from DNS manual)

➤ Telephone numbers:

- ✓ Dictate phone numbers the way you normally say them
- ✓ Pause briefly between each group of numbers
- ✓ DNS will add hyphens automatically

➤ Fractions:

- ✓ Dictate most fractions the way you normally say them
- ✓ *Examples:*
 - “*One half*” $1/2$
 - “*Three fourths*” $3/4$
 - “*Three and seven eighths*” $3 \frac{7}{8}$
- ✓ NOTE: If the denominator is greater than 10, say “*Slash*” between the two numbers
- ✓ *Example:*
 - “*Nine [slash] twelve*” $9/12$

➤ Roman numerals:

- ✓ Dictate Roman numerals by saying “*Roman*” before the number
- ✓ *Example:*
 - “*Roman four*” IV

Numbers & Punctuation

➤ ZIP codes:

- ✓ Dictate the five numbers as a group
- ✓ *Example:*
 - “Five two zero three one” 52031
- ✓ To dictate a 9-number ZIP code, say first 5 numbers, then “Hyphen” and remaining 4 numbers

➤ Punctuation:

(For most common punctuation marks, refer to attached table from DNS manual)

➤ Apostrophe + s:

- ✓ Dictate the word as you normally would; DNS usually adds an apostrophe as needed
- ✓ To ensure DNS will include an apostrophe + s, say the word and then say “Apostrophe s”

➤ Hyphen:

- ✓ Say “Hyphen” between words you want to hyphenate
- ✓ DNS will automatically hyphenate phrases that usually contain hyphens (e.g., *Nine-year-old boy*)
- ✓ To remove a hyphen:
 - Say “Select hyphen” and then say “Spacebar”

Numbers & Punctuation

Numbers, Dates, and Time *Examples*

TO ENTER:	SAY:
NUMBERS	
315	three hundred fifteen <OR> three one five
1485	one thousand four hundred eighty-five <OR> fourteen eighty-five
1,485	one comma four hundred eighty-five <OR> one comma four eight five
809,212	eight hundred nine thousand two hundred twelve <OR> eight zero nine comma two one two
51.2	fifty one point two <OR> five one point two
.6	point six
500	five hundred
5000	five thousand
75%	seventy-five percent
\$88	eighty-eight dollars
\$88.10	eighty-eight dollars and ten cents
\$8.2 million	eight point two million dollars
Dates	
April 9, 2009	April 9 [comma] two thousand nine
4/9/09	four [slash] nine [slash] zero nine
4/9/2009	four [slash] nine [slash] two thousand nine
the 1990s	the nineteen nineties
Times of day	
8:30	eight [colon] thirty <OR> eight [numeric colon] thirty
7:45 AM	seven forty-five am
10:22 PM	ten twenty-two pm
5:00 PM	five o'clock pm

Numbers & Punctuation

Punctuation *Examples*

TO ENTER:	SAY:
,	comma
.	Period (inserts 1 space after)
.	Dot (no space inserted)
?	Question mark
!	Exclamation mark <OR> exclamation point
“	Open quote
”	Close quote
(Open paren
)	Close paren
‘	Apostrophe
‘s	Apostrophe s
-	Hyphen
—	Dash (double hyphen)
	Spacebar (inserts a blank space)

Appendix

✓ Rainbow Passage

✓ Glass

✓ Assignments

Rainbow Passage

When the sunlight strikes raindrops in the atmosphere, they act like a prism and form a rainbow. The rainbow is a division of white light into various beautiful colors. These take the shape of a long round arch, with its path towering above, and its two extremities apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no human ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow.

Throughout the centuries people have explained the rainbow in various ways. Nations have accepted it as a miracle without physical explanation. For certain groups it was taken that there would be no more general floods. The Norsemen considered the rainbow as a bridge over which the Gods passed from earth to their dwelling in the sky. Aristotle thought that the rainbow was caused by reflection of the sun's rays by the rain. The difference in the rainbow depends considerably upon the size of the water drops, and the width of the colored band increases as the size of the drops increases.

Glass

A diamond weighing a pound may cost a million dollars, while a pound of glass may cost less than twenty cents. Yet, measured in terms of the value to the human race, glass is one of the most important materials we have, and is worth far more than any rare gem ever discovered. When the physicist and the chemist have finished discovering all the many kinds of glass that can be made, it will be worth even more.

Glass, before science took it in hand, was just glass. Now it has been developed in dozens of new forms and endowed with a hundred new talents. Tough glasses which retard the flow of heat are made into bricks and many implements. Resistant glasses are molded into vacuum tubes and insulators. New and surprising varieties of glass show unexpected abilities when shaped into frying pans, fire-proof cloth, and even into springboards for diving pools.

An inch cube of glass is so strong that it can support a heavily loaded freight car, though such a task would strain a similar cube of almost any other material. A glass window only one inch thick can be made so that it will stop a bullet.