

# simon

speech model basically consists of two parts:

- Language model: Describes all existing words and what sentences are grammatically correct. It will be created from your active scenario
- Acoustic model: Describes how words sound. It will be either built solely through your voice recordings (training) or with the help of a base model

SPHINX backend“ uses:

- PocketSphinx recognizer
- SphinxTrain model generation backend

models:

- US English HUB4 WSJ SPHINX model. This model is part of pocketsphinx-extra where it is called `\"hub4_wsj_sc_3s_8k.cd_semi_5000\"`.

## install sphinx

prereq

```
sudo apt install bison gradle openjdk-8-jdk
```

build from sources <http://cmusphinx.sourceforge.net/wiki/download>, not use ubuntu packages

## install

```
sudo apt install simon
```

```
sudo apt install libsphinxbase3 python-sphinxbase sphinxbase-utils  
pocketsphinx sphinxtrain
```

edit

[/usr/lib/sphinxtrain/etc/sphinx\\_train.cfg](/usr/lib/sphinxtrain/etc/sphinx_train.cfg)

```
$CFG_CD_TRAIN = 'no';
```

## compile

```
sudo apt-get build-dep simon
```

```
git clone https://github.com/KDE/simon.git
cd simon
export QT_VERSION=qt4
rm -fR build
./build_ubuntu.sh
```

## model

### adapting

<http://cmusphinx.sourceforge.net/wiki/tutorialadapt>

```
sudo apt install pocketsphinx-en-us/xenial
```

```
mkdir /tmp/model
cd /tmp/model
cp -a /usr/share/pocketsphinx/model/en-us/en-us .
cp /usr/share/pocketsphinx/model/en-us/cmudict-en-us.dict .
cp /usr/share/pocketsphinx/model/en-us/en-us.lm.bin .
```

### training

training from <http://cmusphinx.sourceforge.net/wiki/tutorialamdown>

\* download [http://www.speech.cs.cmu.edu/databases/an4/an4\\_sphere.tar.gz](http://www.speech.cs.cmu.edu/databases/an4/an4_sphere.tar.gz) \* enter and sphinxtrain -t an4 setup

### old

For small amount of data for training without context-dependent models use continuous model instead of semi-continuous one and this error will be solved.

This warning is caused by the fact you disabled context-dependent training and used semi-continuous model. You can ignore this error until you have more data and use context-dependent training.

training

```
mkdir /tmp/test
cd /tmp/test

sphinxtrain -t test setup
```

now we have

```
.
```

```
└─ etc
   └─ feat.params
   └─ sphinx_train.cfg
   └─ test.dic
   └─ test.filler
```

adjust sphinx\_train.cfg TODO

From:

<https://wiki.csgalileo.org/> - **Galileo Labs**

Permanent link:

<https://wiki.csgalileo.org/tips/speech/simon?rev=1489089892>

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