

FOSS Speech Recognition



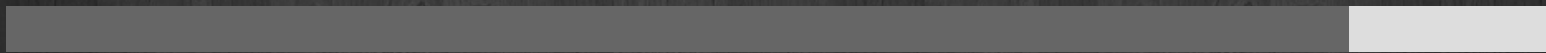




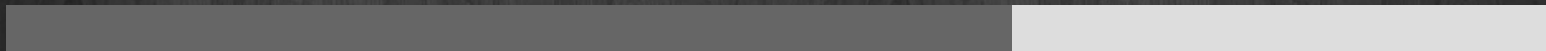
...mặt con nít...
...lẽ phép nói :
...người sạch sẽ như anh...
...bên đất sẽ xuống, đưa hai ch...
...sẽ vút bay đi... Mèo rất t...



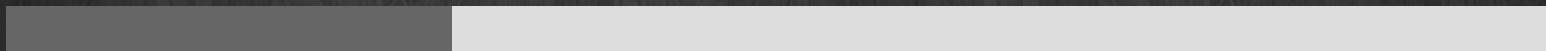
Dictation



Virtual Assistant



Automatic Translation



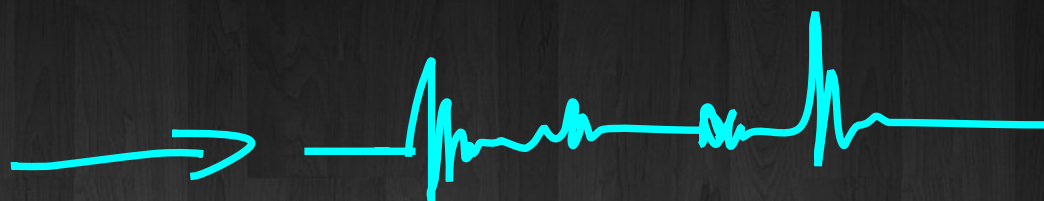




"This is a test"

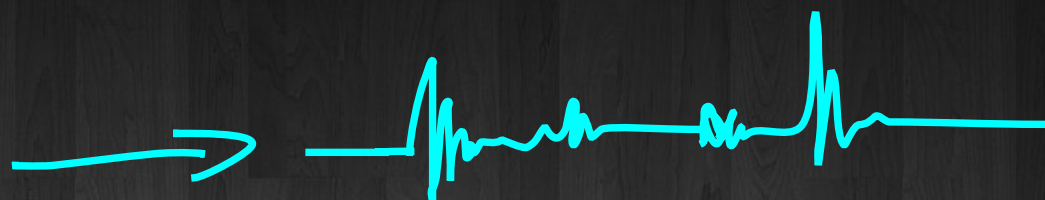


"This is a test"



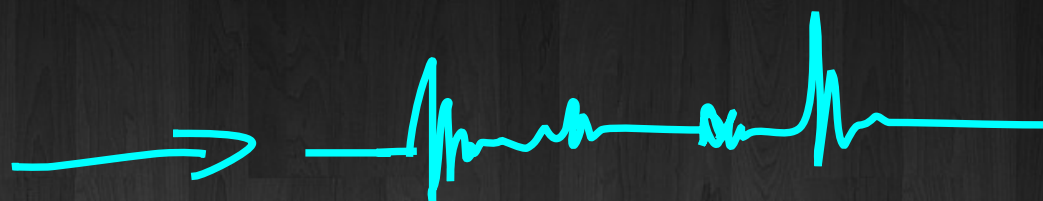
"This is a test"

✓



↓
DH | 12 | EY | - EAST
T | A+ |

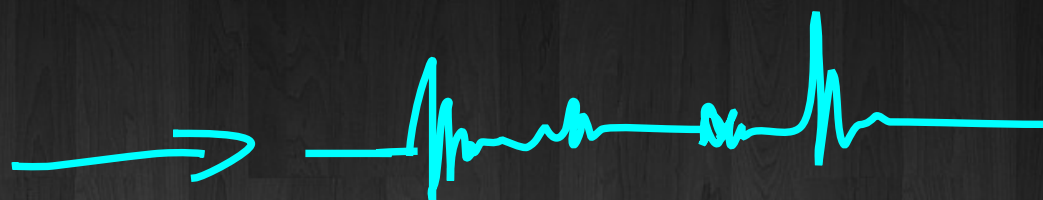
"This is a test"



OH | 12 | EY | EAST
T | A+

THIS IS | ATTEST
A TEST

"This is a test"



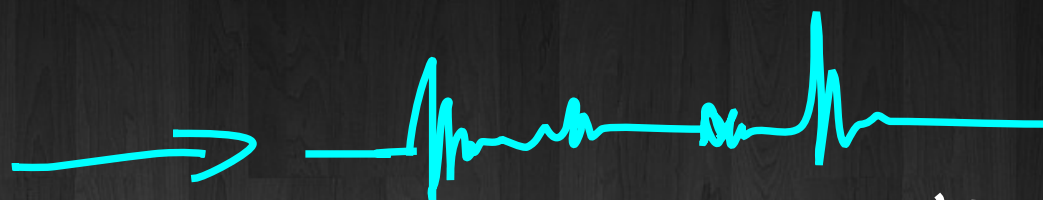
↓
DH | 12 | EY | - EAST
T | A + |

↓
THIS IS | A TTEST
| A TEST



This is a test

"This is a test"



↓ Acoustic Model

OH | 1 2 | EY | - EA ST
T | A + |

↓ Language Model

THIS IS | ATTEST
| A TEST

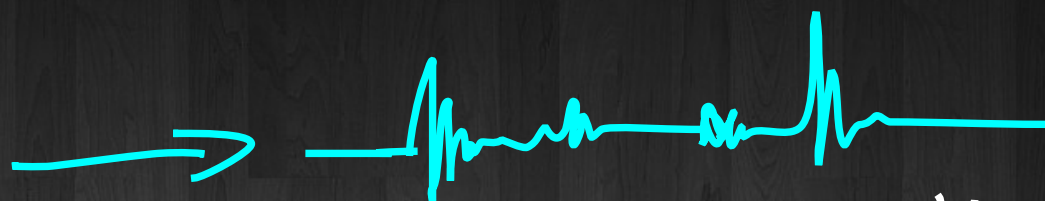


This is a test

"This is a test"



CMU SPHINX



↓ Acoustic Model

OH | 12 | EY | - E A S T
T | A + |

↓ Language Model

THIS IS | A T T E S T
A - E S T

↓

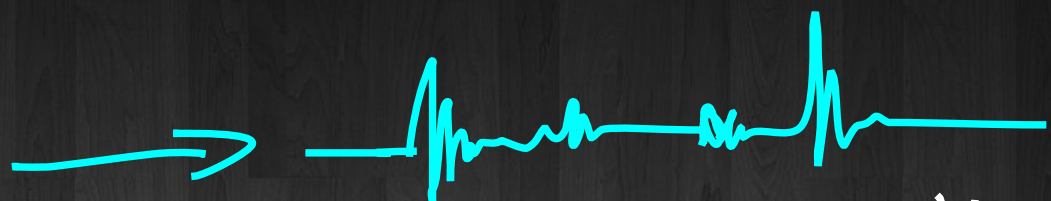
Simon

This is a test

"This is a test"



CMU SPHINX



↓ Acoustic Model

OH | 12 | EY | - EAST
T | A + |

↓ Language Model

THIS IS | ATTEST
A TEST

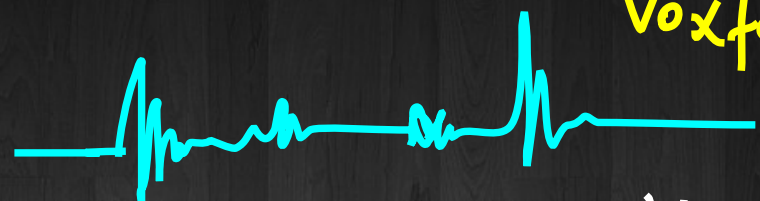
Simon

This is a test

"This is a test"



CMU SPHINX



Voxforge

↓ Acoustic Model

OH | 12 | EY | EAST
T | A +

Wiki, News, ...

↓ Language Model

THIS IS | ATTEST
A TEST



Simon

This is a test



Windows Vista: User



Windows Vista: Live Demo



Windows Vista: Perl

FOSS Dictation: Demo



FOSS Dictation: 13.30 % WER
(Prototype in Optimal Conditions)

What's next?

80:20 Rule

Language and Acoustic Models

Audio Books

Submissions to Voxforge

Server-side collection: Games?

Recordings of talks?

Text donation project for e.g. Blogs?
etc.

Dialog Manager

Improving dictation: Corrections, performance, etc.
Virtual Assistant based on Nepomuk?
Plasma Active?
\$mobileOS?
etc.

Our own Speech Model: Flexibility++

Incredibly interesting,
Incredibly little interest

Interested?
BOF on Tuesday

Peter Grasc
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peter@grasch.net

Image Credits

"Jumping" by Javier Morales

"Gamer 542" by c ps

"Language barrier might widen gaps in learning" from
the World Bank Photo Collection

"Robot" by Andrea Vallejos