Lecture 14: Multimedia Data, ELAN

LING 1340/2340: Data Science for Linguists

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Objectives

- Speech data:
  - Multimodal: audio + text
  - Working with spoken language in Python
- Video data:
  - Multimodal: video + audio + text
  - Quick tour: ELAN
- Presentations:
  - Sonia
  - Emily

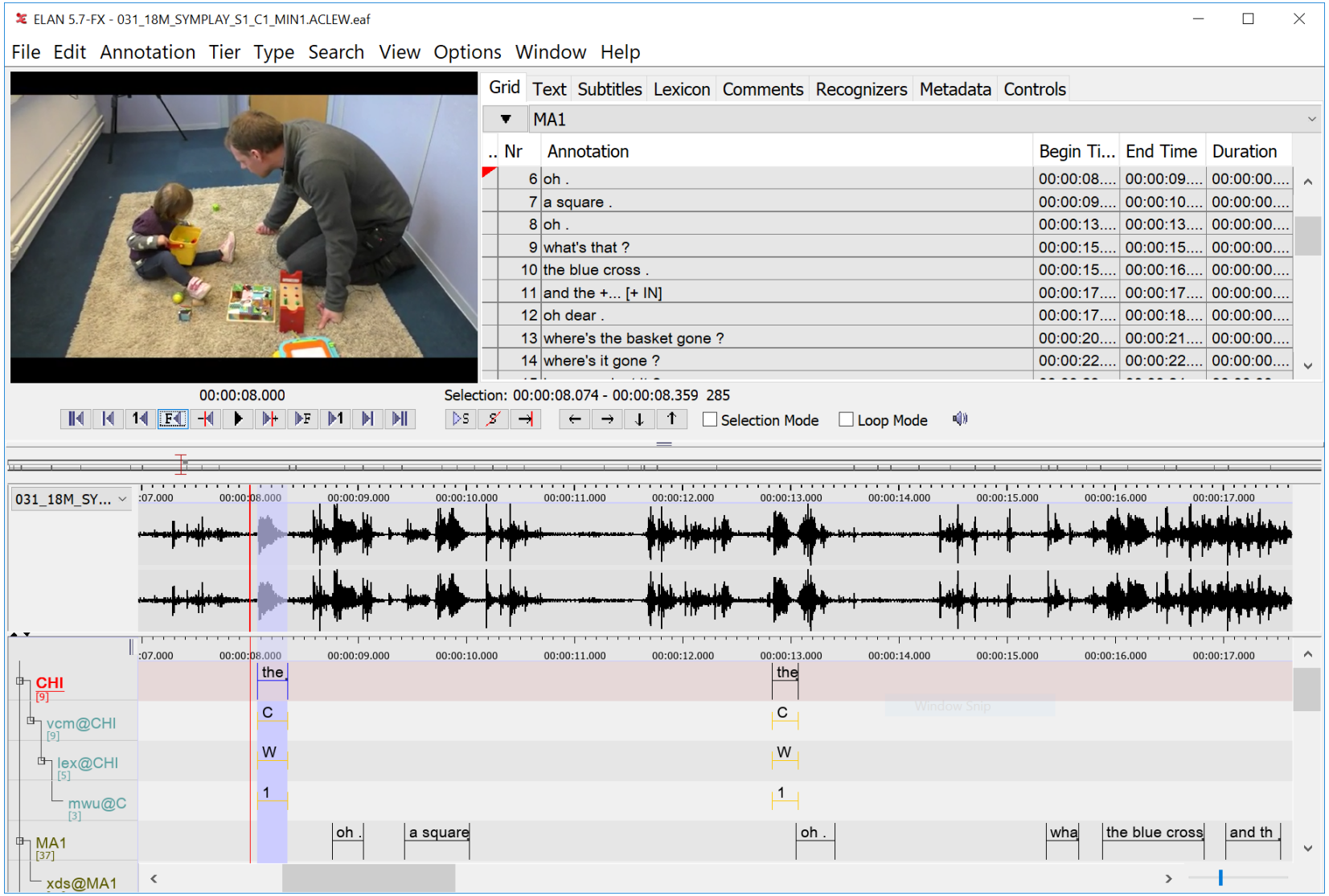
Spoken language + Python

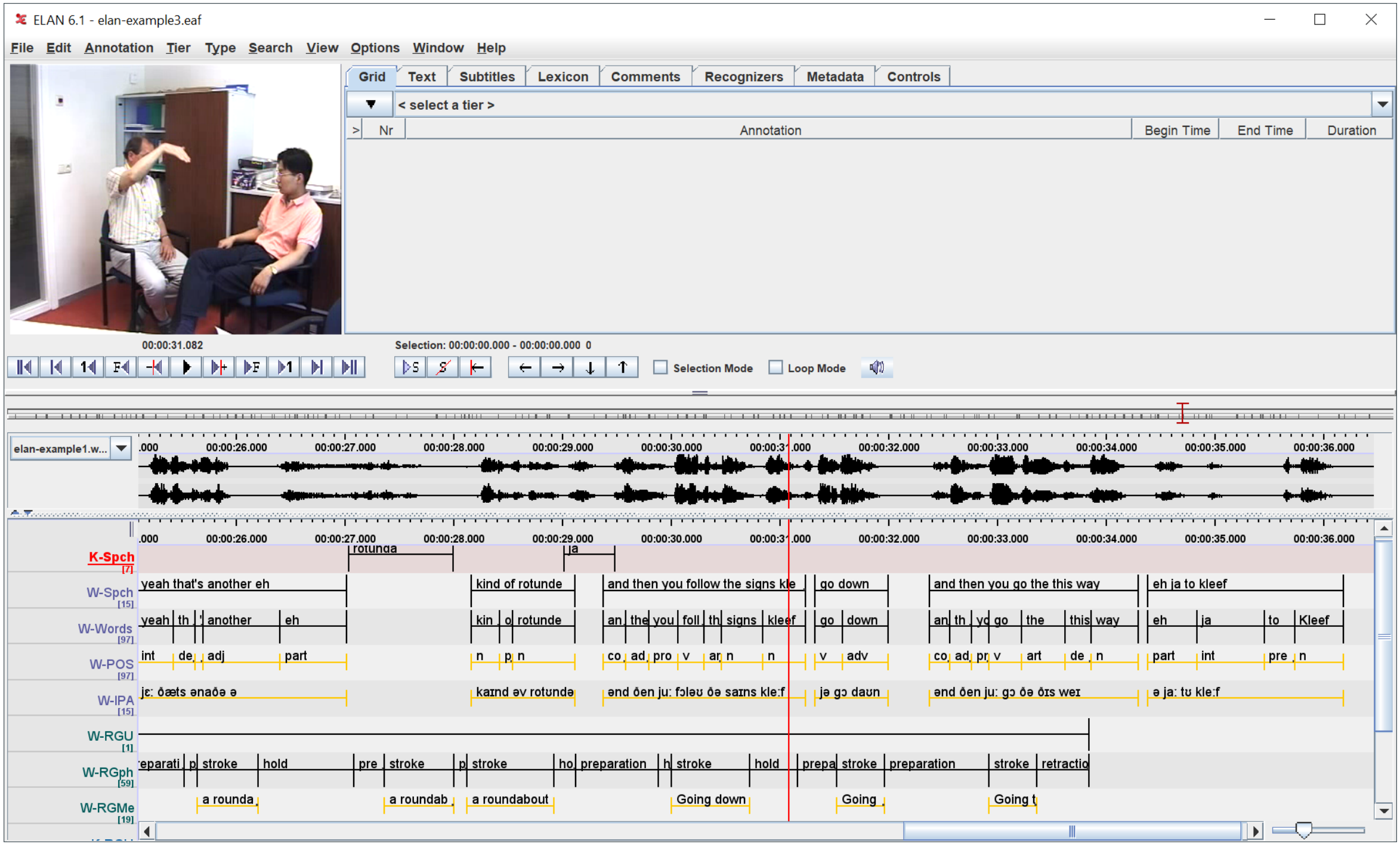
- Praat in Python
  - Libraries: `Praat-textgrids`, `Parselmouth`
- `SpeechRecognition` library
  - https://github.com/Uberi/speech_recognition
  - Speech recognition module for Python, supporting several engines and APIs, online and offline.
- DataCamp course: Spoken Language Processing in Python
  - https://learn.datacamp.com/courses/spoken-language-processing-in-python
  - Libraries covered: `wave`, `SpeechRecognition`, `PyDub`

DataCamp subscription until Jul 10!

ELAN

- https://archive.mpi.nl/tla/elan
- An annotation tool for audio and video recordings
  - Annotation platform for **audio** and **video** recordings
  - Supports multiple annotation tiers: word, gloss, utterance, contextual reference, gesture, etc.




ELAN 6.1 - elan-example3.eaf
File Edit Annotation Tier Type Search View Options Window Help
Grid Text Subtitles Lexicon Comments Recognizers Metadata Controls
< select a tier >
Nr Annotation Begin Time End Time Duration
00:00:31.082
Selection: 00:00:00.000 - 00:00:00.000 0
Selection Mode
Loop Mode
elan-example1.w...
K-Spch [7]
W-Spch [15]
W-Words [97]
W-POS [97]
W-IPA [15]
W-RGU [1]
W-RGph [59]
W-RGMe [19]
rotunda
ja
yeah that's another eh
kind of rotunde
and then you follow the signs kle
go down
and then you go the this way
eh ja to kleef
yeah th another eh
kin o rotunde
an the you foll th signs kleef
go down
an th yo go the this way
eh ja to Kleef
int de adj part
n p n
co ad pro v ar n n
v adv
co ad pr v art de n
part int pre n
jɛ: ðæts ənaðə ə
kaɪnd əv rotʊndə
ənd ðen ju: fɔləʊ ðə saɪns kle:f
jə gɔ daʊn
ənd ðen ju: gɔ ðə ðɪs weɪ
ə ja: tʊ kle:f
eparati p stroke hold pre stroke p stroke ho preparation h stroke hold prepa stroke preparation stroke retractio
a rounda
a roundab
a roundabout
Going down
Going
Going t

.EAF file

- .EAF file holds annotation layers.
- XML format!

elan-example3.eaf - Notepad

File Edit Format View Help

```
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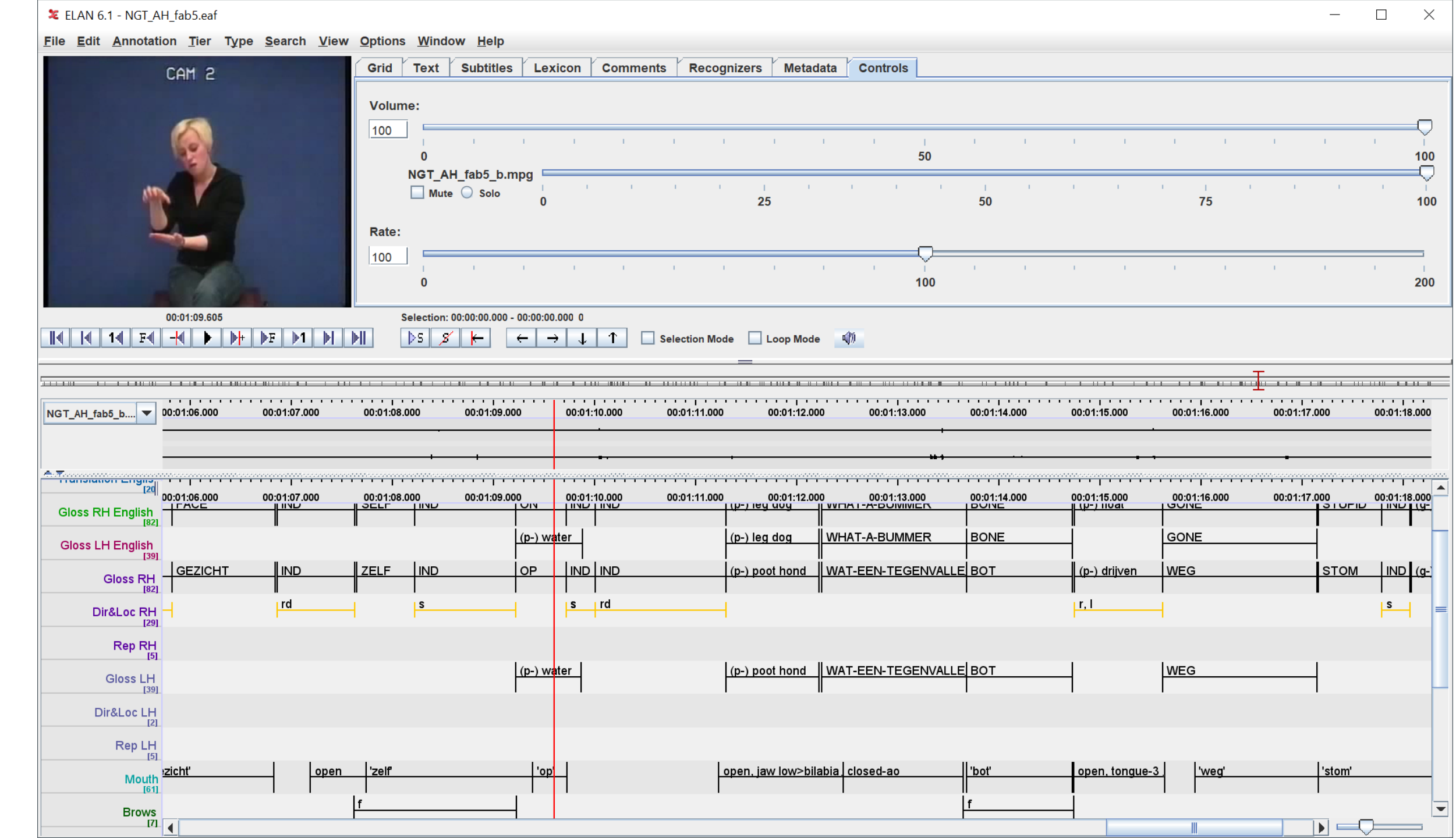
Ln 1, Col 1 | 100% | Unix (LF) | UTF-8


ELAN 6.1 - NGT_AH_fab5.eaf
File Edit Annotation Tier Type Search View Options Window Help
CAM 2
Grid Text Subtitles Lexicon Comments Recognizers Metadata Controls
Volume:
100
0 50 100
NGT_AH_fab5_b.mpg
Mute Solo
0 25 50 75 100
Rate:
100
0 100 200
00:01:09.605
Selection: 00:00:00.000 - 00:00:00.000 0
Selection Mode
Loop Mode
NGT_AH_fab5_b....
00:01:06.000 00:01:07.000 00:01:08.000 00:01:09.000 00:01:10.000 00:01:11.000 00:01:12.000 00:01:13.000 00:01:14.000 00:01:15.000 00:01:16.000 00:01:17.000 00:01:18.000
Gloss RH English [82]
Gloss LH English [39]
(p-) water
(p-) leg dog
WHAT-A-BUMMER
BONE
GONE
Gloss RH [82]
GEZICHT
IND
ZELF
IND
OP
IND
IND
(p-) poot hond
WAT-EEN-TEGENVALLE
BOT
(p-) drijven
WEG
STOM
IND
Dir&Loc RH [29]
rd
s
s
rd
r, l
s
Rep RH [5]
Gloss LH [39]
(p-) water
(p-) poot hond
WAT-EEN-TEGENVALLE
BOT
WEG
Dir&Loc LH [2]
Rep LH [5]
Mouth [61]
'zicht'
open
'zelf'
'op'
open, jaw low>bilabia
closed-ao
'bot'
open, tongue-3
'weg'
'stom'
Brows [7]
f
f

Wrapping up

- OMET survey
  - PLEASE do OMET survey!!
  - VERY important for small courses like this
- Presentations on Tue:
  - Abby
  - Jordan
  - Frances