Introduction:
TTS System Components
TTS: Processing tasks

- Will this course on TTS end on 02-05-2020 at 5:45pm?
- Endet dieser Kurs, TTS, am 7.2.1999 um 17.45 Uhr?

- properties of text
- properties of voice
Will this course, on TTS, end on 02-05-2020 at 5:45pm?

Will this course [comma] on TTS [comma] end on the fifth of February two thousand twenty at five fourty-five p m [question mark]

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((Will DIs kors) (On ti: ti: Es) (End On D@ fIfT @v fEbru@ri:) (At faIv forti: faIv pi: Em _))
TTS: Processing tasks

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TTS: System components

- **text**
  - linguistic text analysis
  - prosody control
  - speech synthesis
  - synthetic speech
TTS: Linguistic text analysis

\[ \text{text normalization} \]

- lexical & morphological analysis
  - lexicon lookup
  - morphological analysis
- syntactic analysis
- prosodic analysis
  - phrasing
  - accenting
- phonological analysis
  - pronunciation
  - syllabification
TTS: Prosody control

- duration modeling
  - segmental durations
  - syllable durations
  - pause durations
  - local speaking rate
- intonation modeling
  - phrasing
  - accenting
- amplitude modeling
TTS: Synthesis

- concatenative synthesis
  - unit selection
  - unit concatenation
- or rule-based synthesis
  - acoustic trajectories
  - articulatory trajectories
- signal generation

\[ \text{synthetic speech signal} \]
TTS components

- pipeline architecture
- each module designed to solve a specific task
- unidirectional processing
- alternative: end-to-end systems (later in this course)