BITS Workshop

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Generation and Corpora

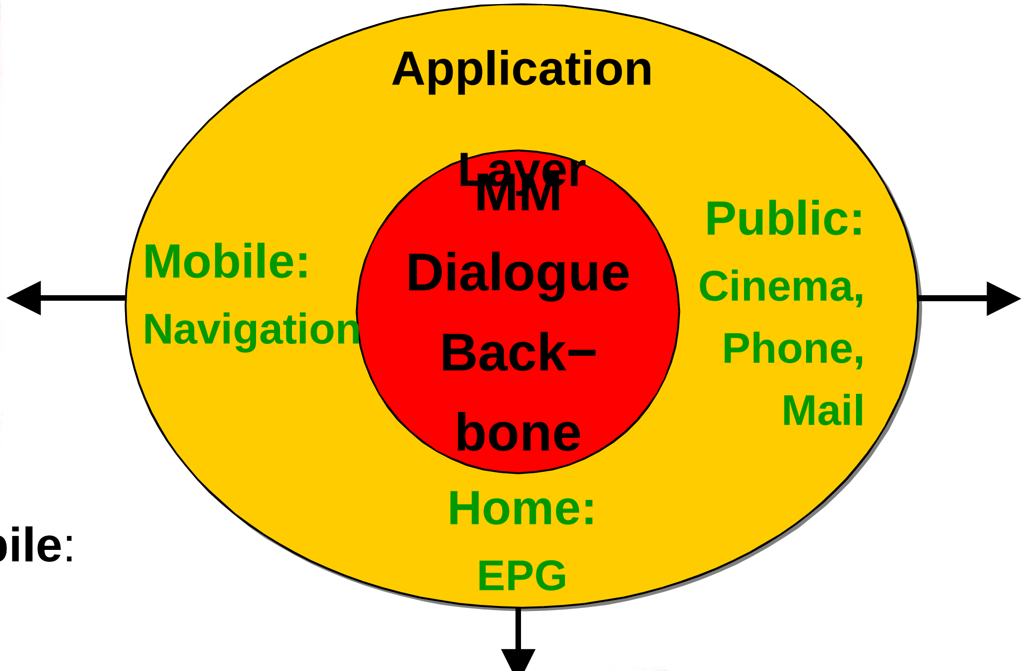
- from
  speech corpora
- to
  speech synthesis
- to
  speech generation

- Natural Language Generation (NLG) is the customer of the customer of the corpus

SmartKom: A Transportable Interface Agent

SmartKom−Mobile:

A Handheld Communication Assistant



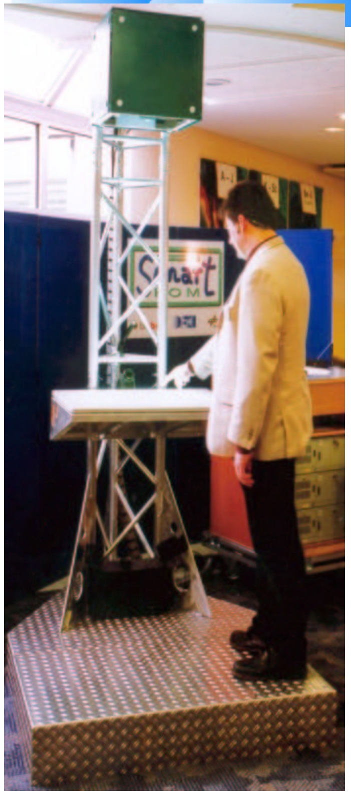
Application Layer

MM Dialogue Back−bone

Mobile: Navigation

Public: Cinema, Phone, Mail

Home: EPG



SmartKom−Public:

A Multimodal Communication Kiosk

SmartKom−Home/Office:

Multimodal Portal to Information Services

Multimodal Interaction in SmartKom

Scenario:

public (mobile, home)

Application:

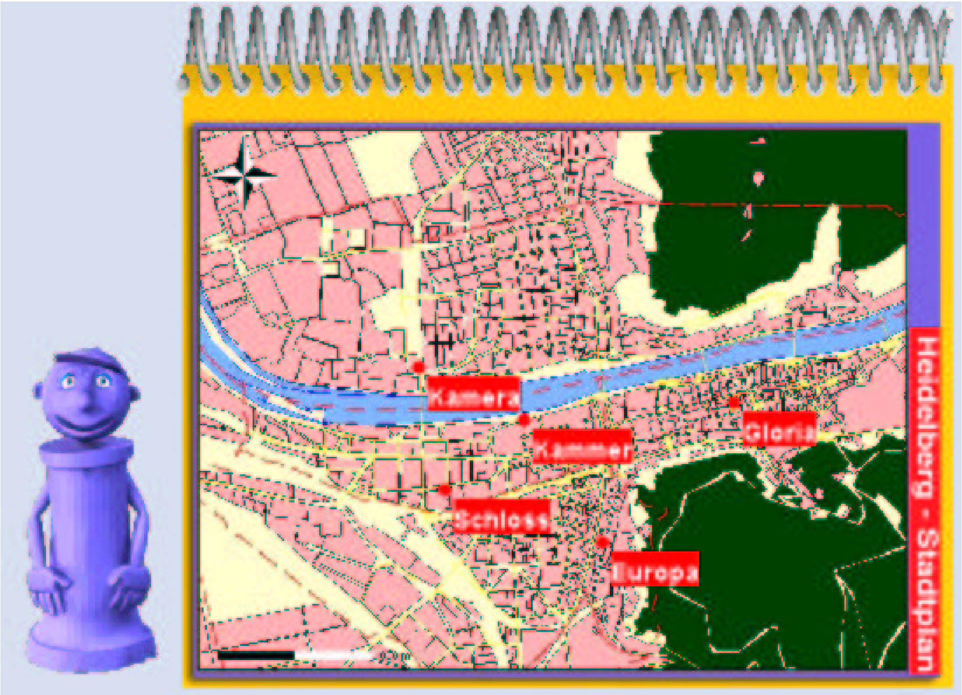
movie information

(EPG, email, phone, fax,

address book,

tv and vcr control,

routing/tourist info)

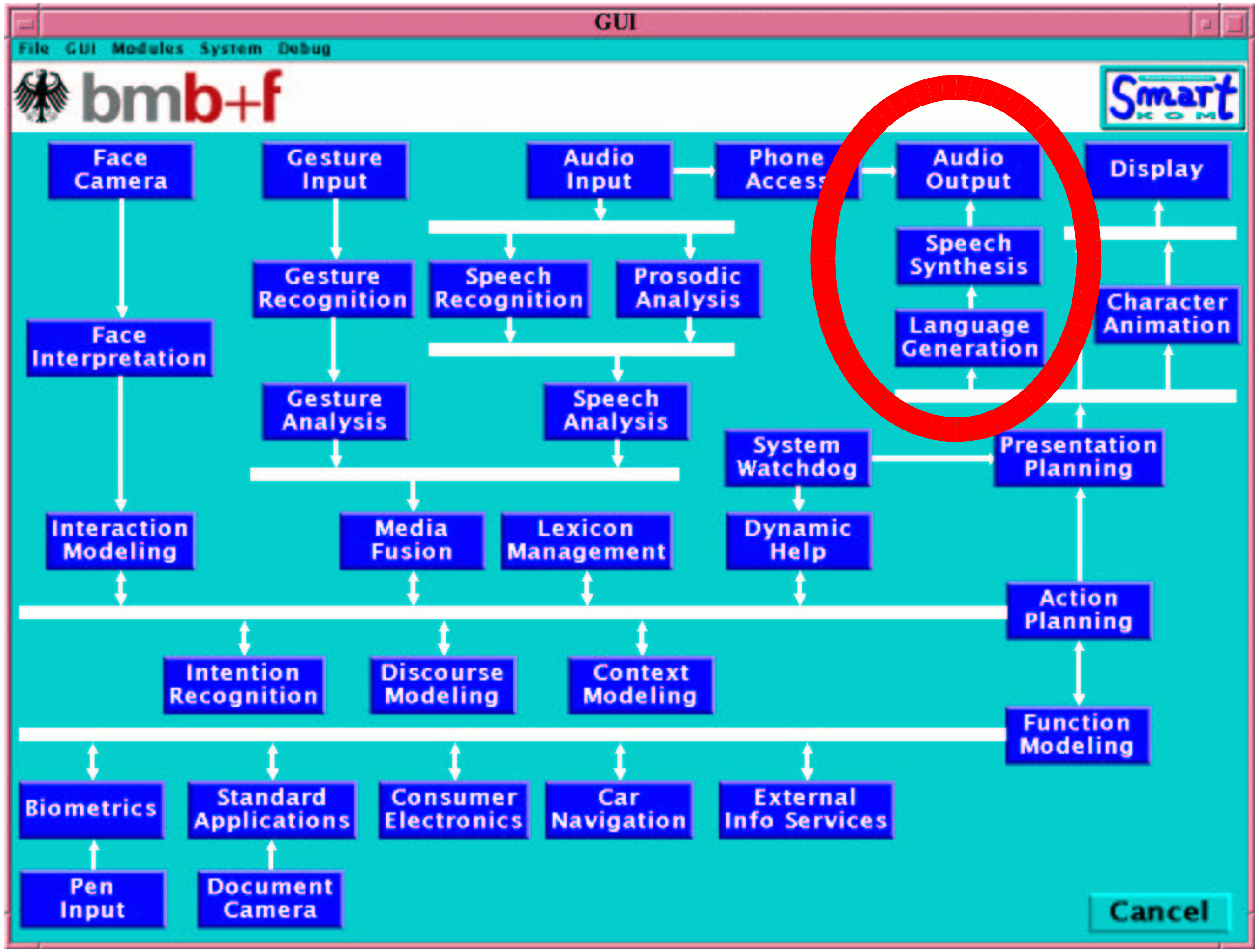


U: ***I want to make a reservation in (R) this movie theater***

S: This theater does not take reservations

U: ***Then a different one, (R) this one perhaps***

:ontrol GUI in SmartKom



Result of Natural Language Generation

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 <syntaxElement  syntaxCategory="Det">
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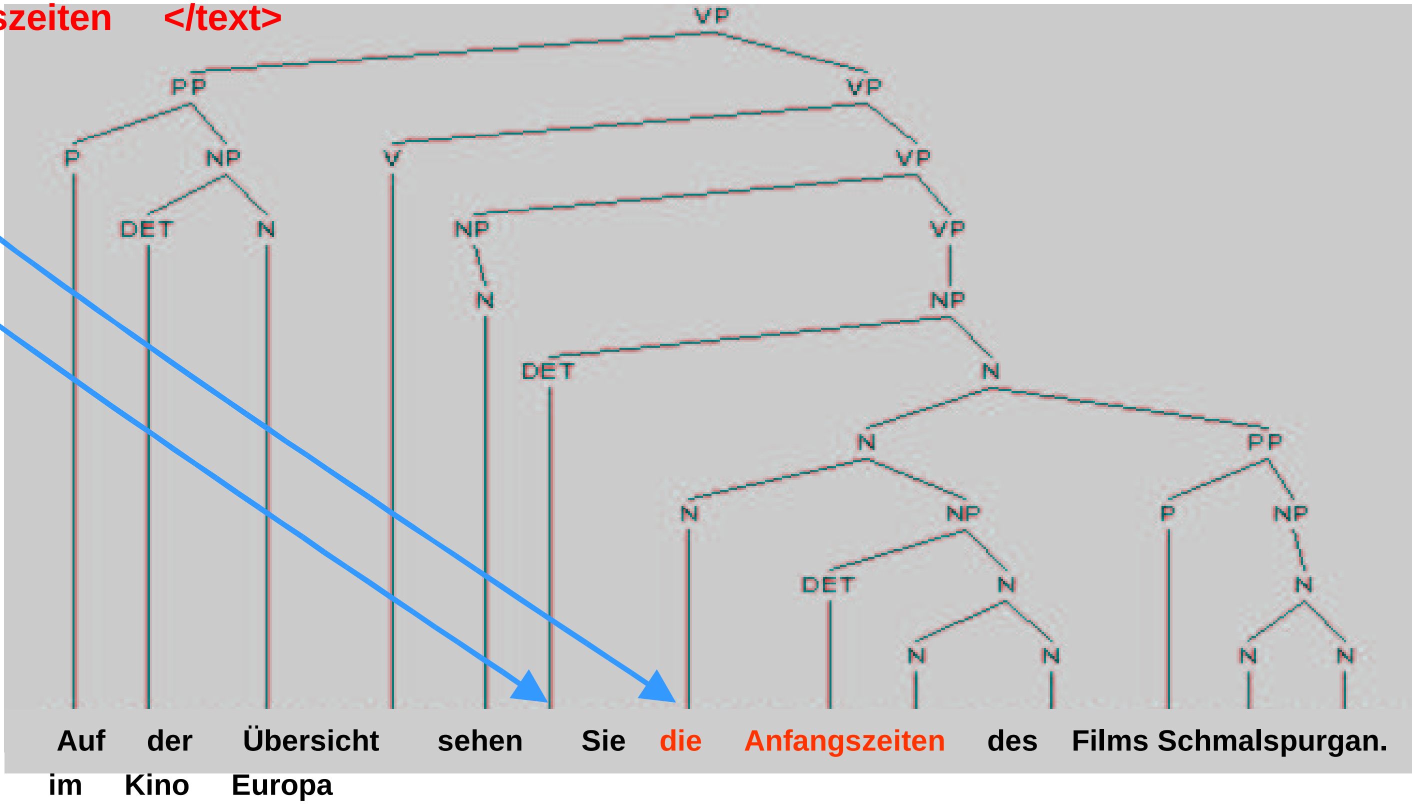
     <text>                    die                  </text>
   </lexicalElement>
 </syntaxElement>
 <syntaxElement   syntaxCategory="N">
      <lexicalElement    partOfSpeechTag="NN">
        <text>          Anfangszeiten     </text>
      </lexicalElement>
    </syntaxElement>

taxElement>
ence>
urseElement>
x>
```

XML Format

graphical representation



TS: Available Information

- Discourse Structure
  - e.g., elaboration, contrast
- Discourse Status
  - given/new, topic/focus
- Semantics?
- Syntax:
  - boundaries: syntactic structure
  - sentence type, POS, morphology, ...
- Attitude, Emotion,
- Multimodal Aspects:
  - coordination with gesture, posture, facial expressions, ...

3ut what is relevant?

- Many different types of data available but
- Which should be part of a corpus:
  - automatic annotation
  - standardized formats
  - relevance to synthesis

Annotation Formats

- Information structure
  - RST
- Attitude?
- Syntax
  - Penn Treebank
  - Chunks, topological fields, ...
- POS
  - STTS