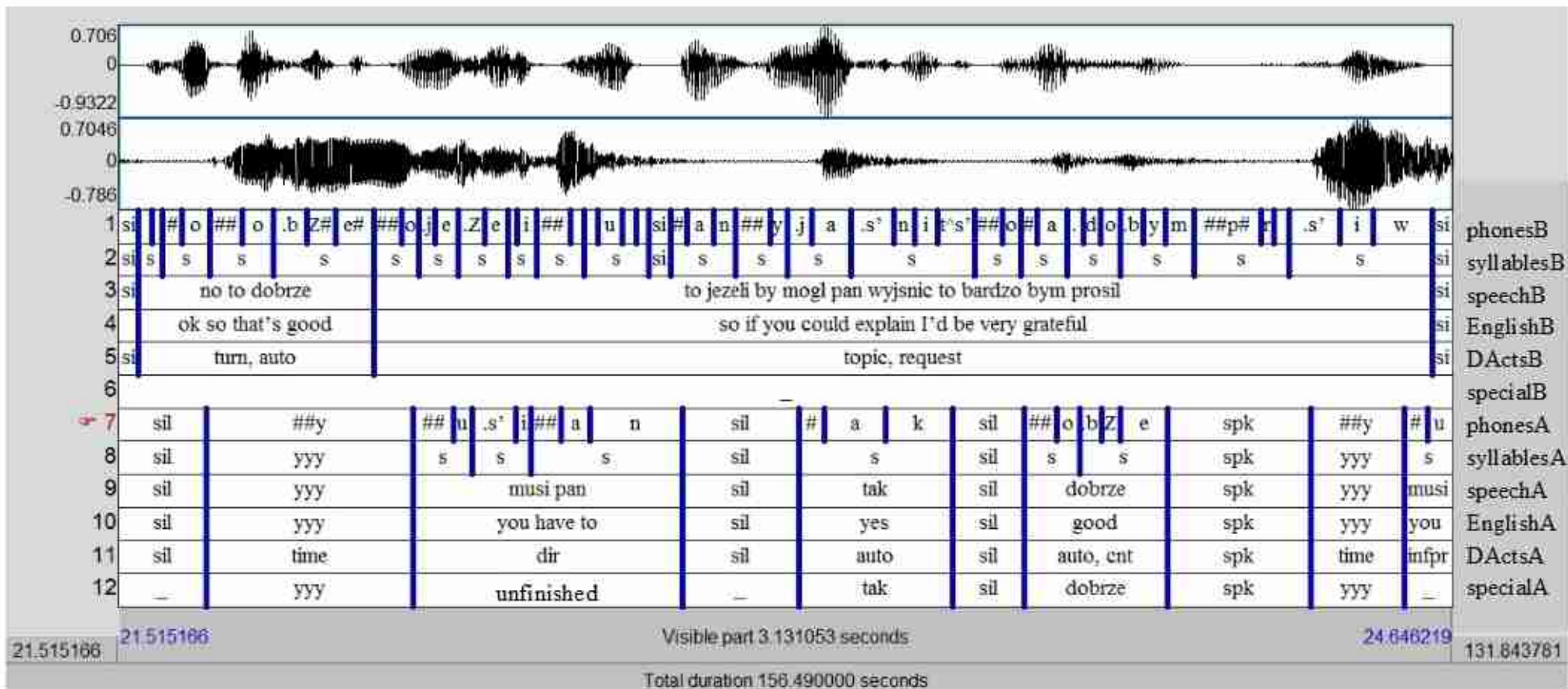


# Analiza dialogu

Jolanta Bachan

# Anotacja dialogu



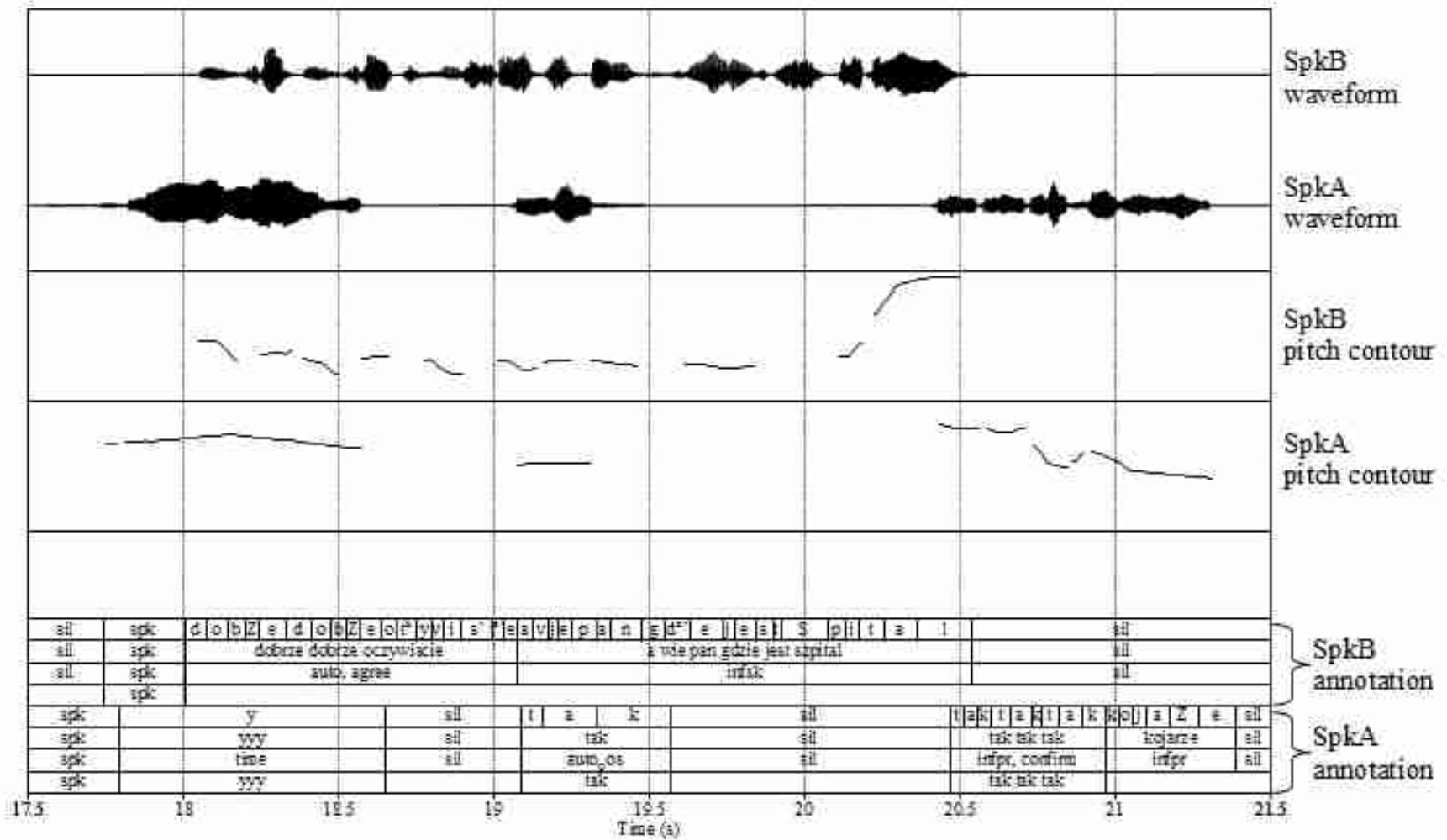
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Object class = "TextGrid"

xmin = 0  
xmax = 156.49  
tiers? <exists>  
size = 8  
item []:

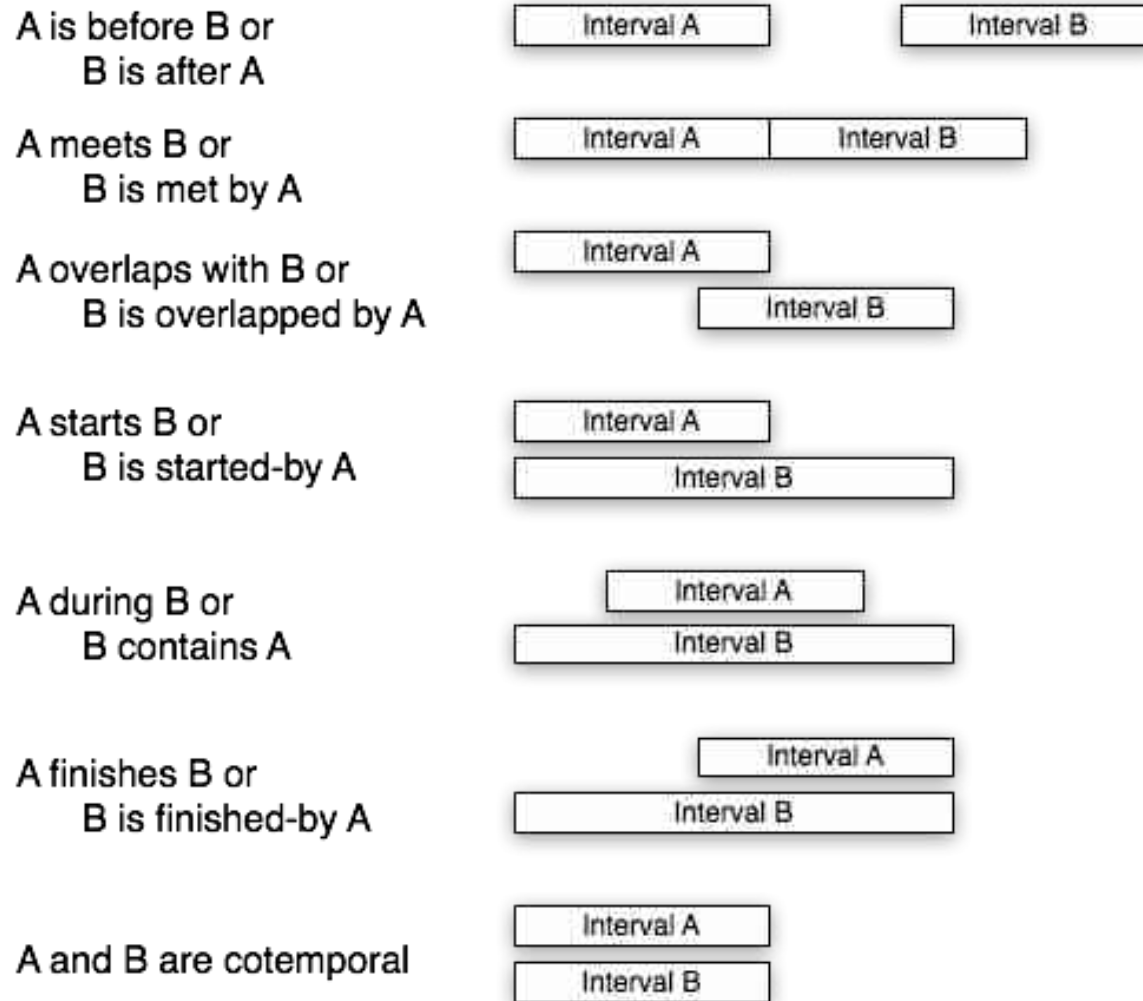
## *Praat TextGrid file format*

item [1]:  
class = "IntervalTier"  
name = "phonesB"  
xmin = 0  
xmax = 156.49  
intervals: size = 617  
intervals [1]:  
xmin = 0  
xmax = 5.154305596900908  
text = "sil"  
intervals [2]:  
xmin = 5.154305596900908  
xmax = 5.454149176931758  
text = "y#"

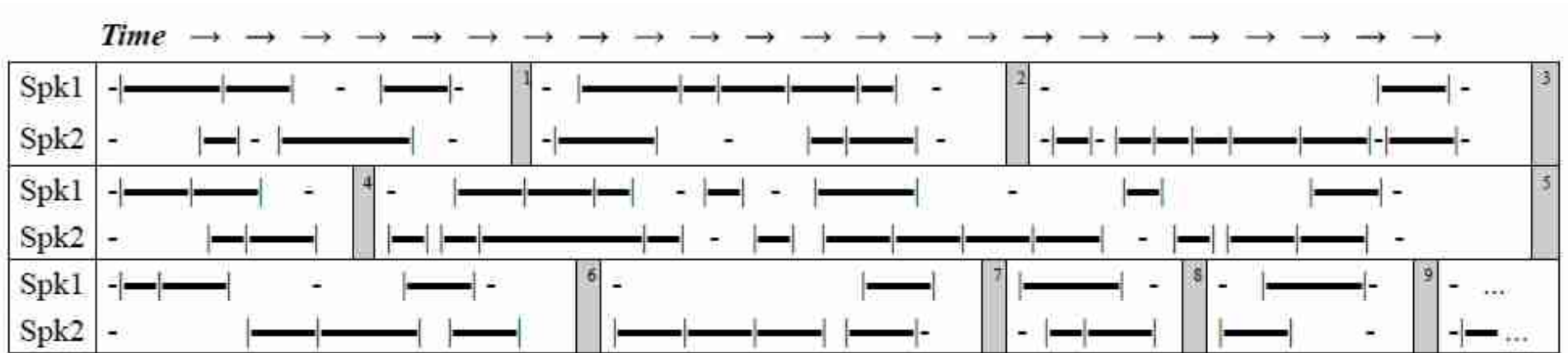
# Analiza F0



# Relacje czasowe (Allen 1983)



# Relacje czasowe



# Dialog acts

- A dialog act is a specialized speech act. For example, Question is a speech act, but Question\_on\_hotel is a dialog act. Dialog acts are different in different dialog systems. The number of speech acts are commonly recognized, and is stable around 10 or so, the number of dialog acts vary from systems to systems. In some systems,[1] the number of dialog acts can be up to 40.
- The research on dialog acts have increased since 1999, after spoken dialog systems became commercial reality. *Wikipedia*

# Główne kategorie DIT (1)

- General purpose communicative functions
  - Information transfer
    - Information seeking
    - Information providing
  - Action discussion functions
    - Commissives, e.g. promise
    - Directives, e.g. dismissal
- Dimension-specific communication functions
  - Activity-specific functions
    - Open meeting
    - Bet
    - Congratulation
    - ...



# Główne kategorie DIT (2)

- Dimension-specific communication functions
- Dialogue control functions
  - Feedback
    - Auto-feedback
    - Allo-feedback
  - Interaction management
    - Turn management
    - Time management
- Contact management
- Own communication management
- Partner communication management
- Discourse structure management, e.g. topic shift
- Social obligations management
  - Salutation
  - Self-introduction
  - Apologising e.g. prayer gesture
  - Gratitude expressions e.g. thumbs up gesture
  - Valediction

# Wybrane akty dialogowe (Bunt 2000)

<i>Abbreviation</i>	<i>Dialogue act function</i>
allo	allo-feedback
auto	auto-feedback
cnt	contact management
dir	directives
infpr	information providing
infsk	information seeking
open	open meeting
own	own communication control
partner	partner communication management
social	social obligations management
time	time management
turn	turn management

- *Auto-Feedback* acts are about the speaker's own attention and processing of an utterance in the addressee's last turn
- *Allo-Feedback* acts are about the speaker's beliefs about the addressee's attention and processing of an utterance in the speaker's last turn.
- *Contact management functions*
  - Contact Check : S wants to establish whether A is ready to receive messages from and to send messages to S
  - Contact Indication: S wants A to know that S is ready to send messages to and receive messages from A

- *Directives* - S wants A to consider a certain action which A might carry out (possibly together with S), potentially wanting to put pressure on A to do so
- *Information-providing* - All information-providing acts have in common that the speaker provides the addressee certain information which he believes the addressee not to know or not to be aware of, and which he assumes to be correct
- *Information-seeking* - All functions in this class have in common that the speaker wants to know something, which he assumes the addressee to know, and puts pressure on the addressee to provide this information

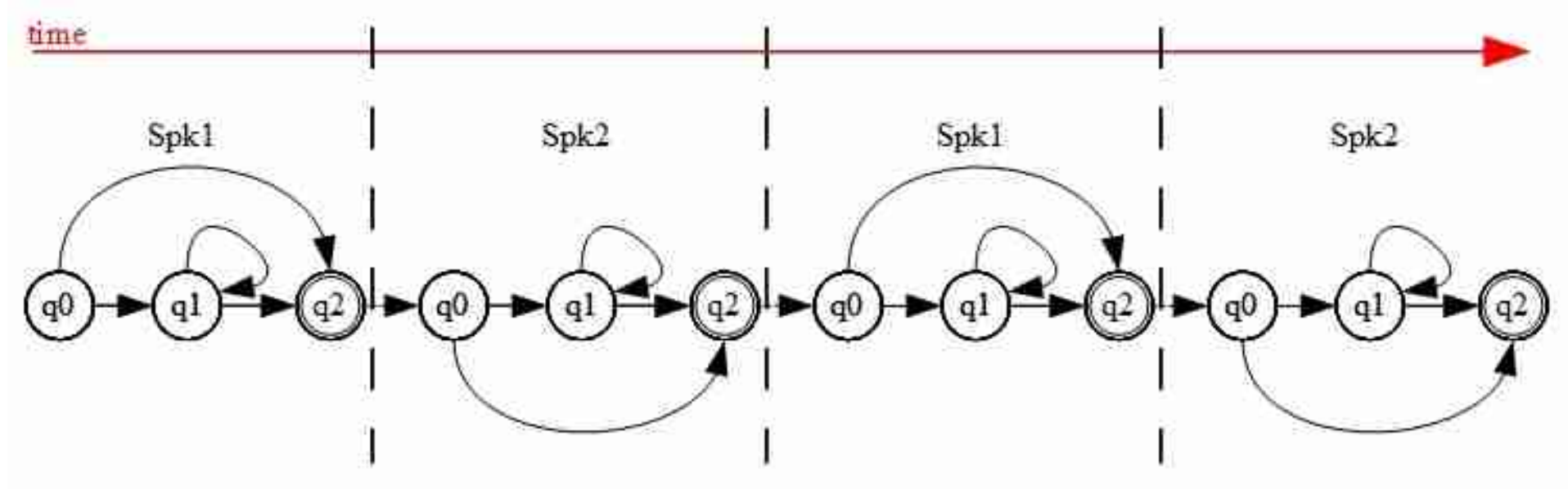
- *Dialogue structure management functions:*
  - Open meeting, Preclosing (S plans to end the current dialogue shortly), Topic introduction, Topic shift announcement, Topic shift
- *Own communication management functions:*
  - Self-error signal: S wants A to know that S has made a mistake in speaking
    - Retraction: S wants to withdraw something that he said within the same turn
      - Self-correction: S wants to correct an error that he made within the same turn
- *Partner communication management functions:*
  - Completion: S wants to help A to complete an utterance that A is struggling to complete
  - Correct-misspeaking: S wants to correct (part of) an utterance by A, believing that A made a speaking error

- *Social obligations management functions:*
  - Salutation (Initial greeting, Return greeting), Self-introduction, Apologizing, Gratitude, Valediction
- *Time management functions:*
  - Stalling: S needs a little bit of time to formulate an utterance
  - Pausing: S needs some time to do something
- *Turn management acts* are those dialogue acts which are performed in order to keep or to reallocate the speaker role.
  - Turn-unit-initial functions: Turn Take, Turn Accept, Turn Grab
  - Turn-unit-final functions: Turn Keep, Turn Assign, Turn Release

# Zadanie

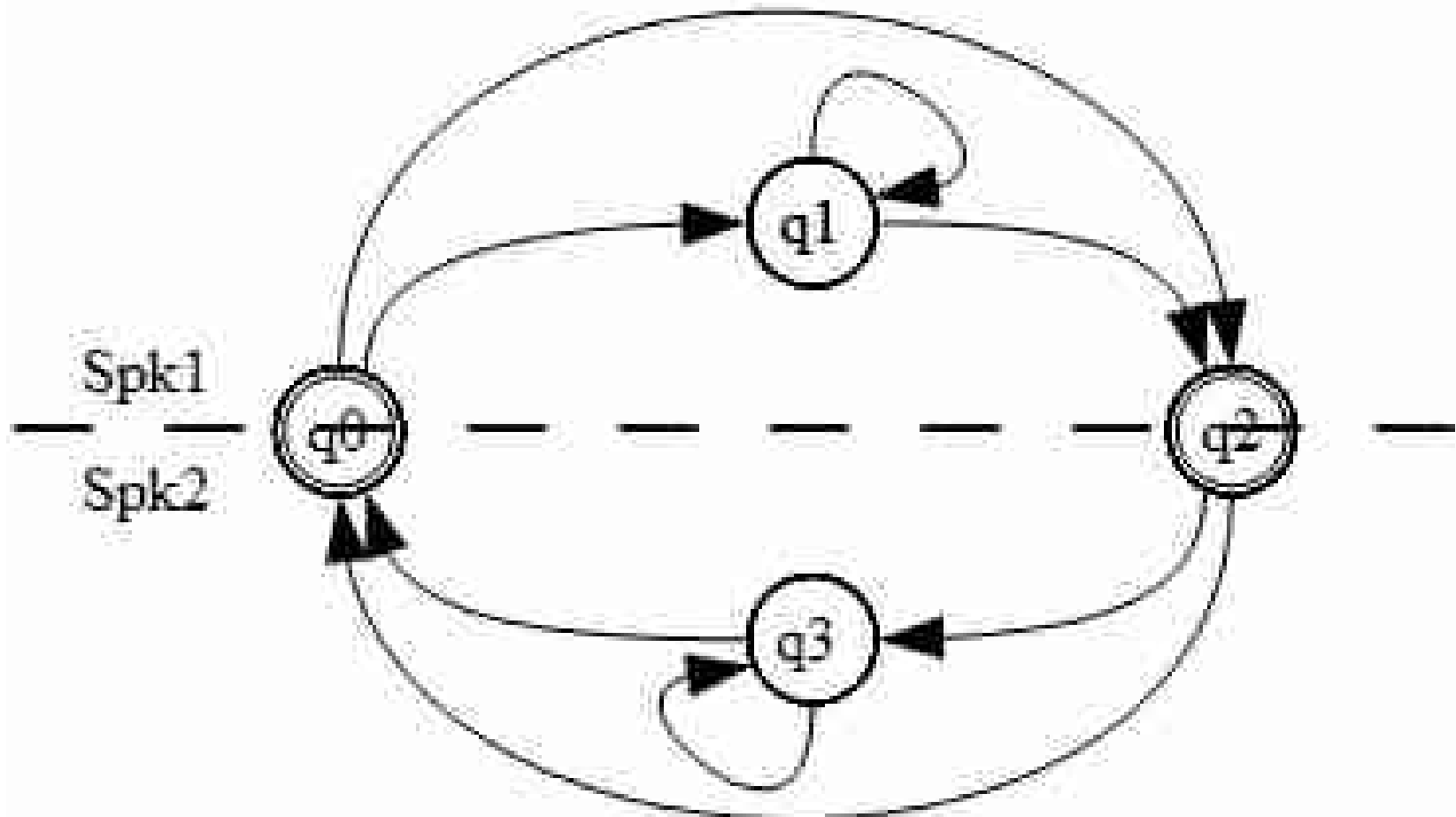
- Poanotuj dialog na poziomie aktów dialogowych
  - <http://bachan.speechlabs.pl/files/dialogues/dialog.wav>
- Przeanalizuj wstępnie dialog
  - Jakie akty dialogowe rozpoczynają kolejną dialogową?
  - Jakie akty dialogowe kończą kolejną dialogową?
  - Jakie akty dialogowe występują najczęściej u mówcy A, a jakie u mówcy B?
  - Czy kolejki dialogowe są długie i składają się z wielu aktów dialogowych?
  - Kiedy pojawiają się jęki namysłu (ang. *fillers*)? Jakie są to dźwięki?

# Linearny model

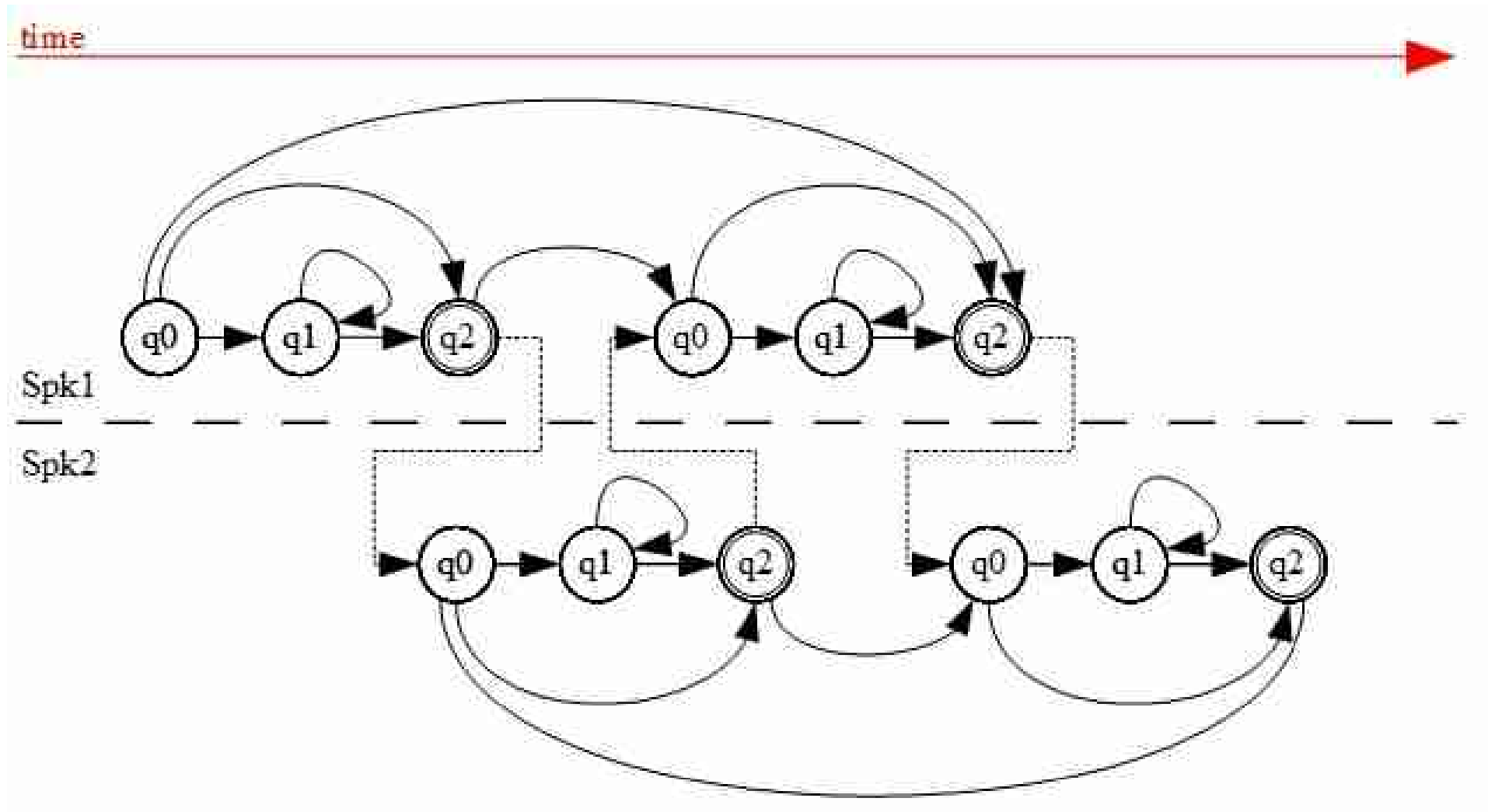




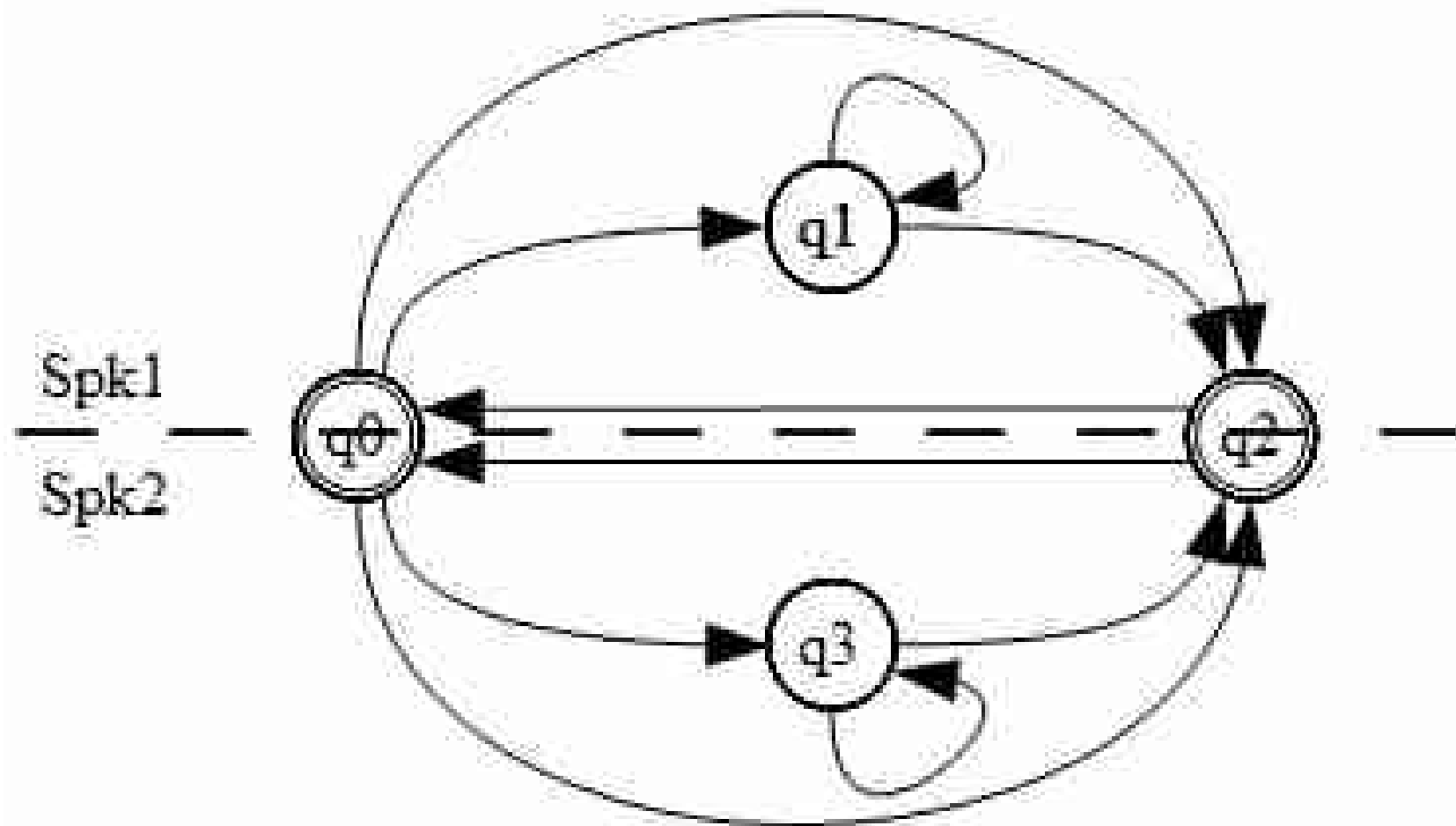
# Model linearny



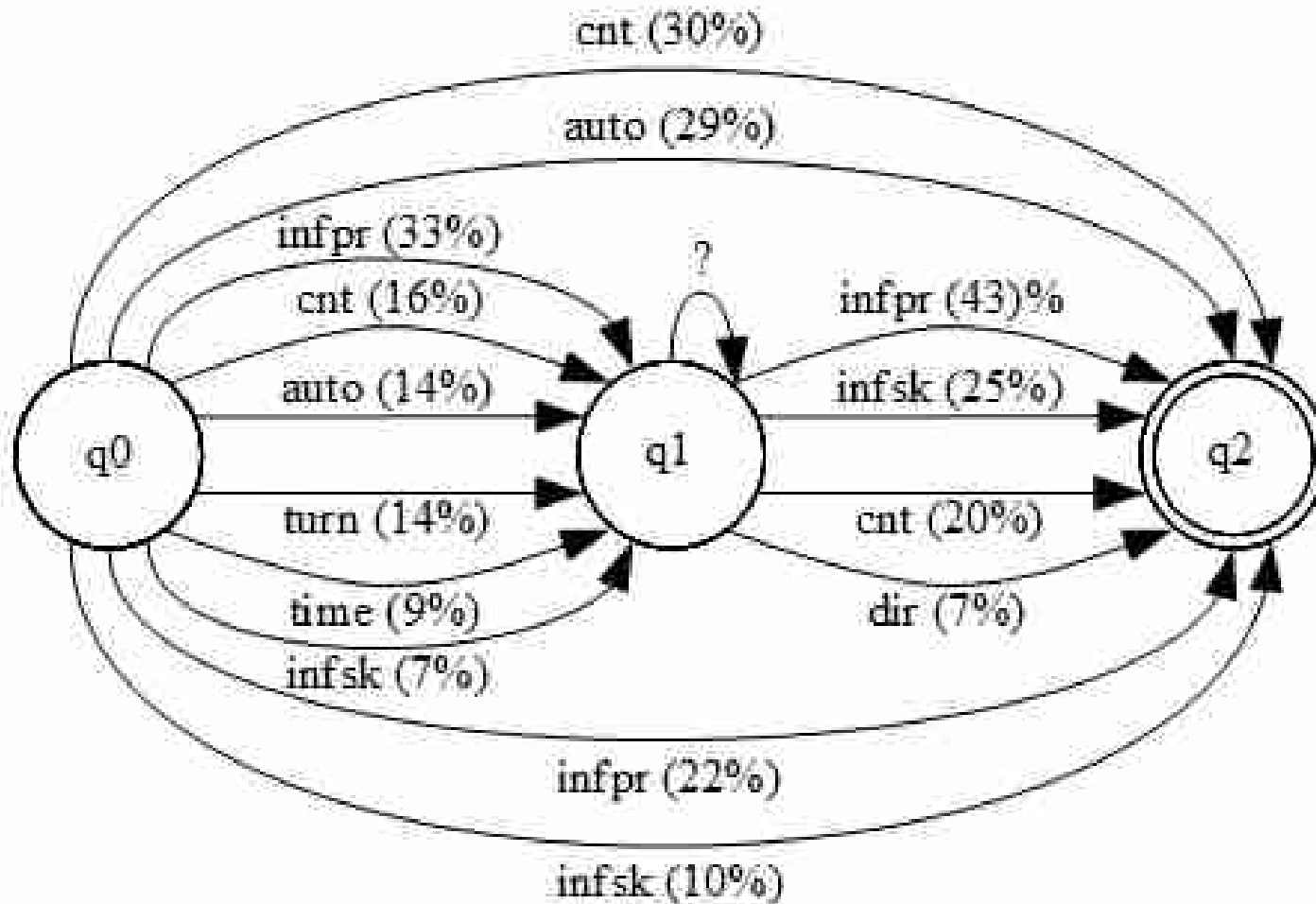
# Model nakładający się



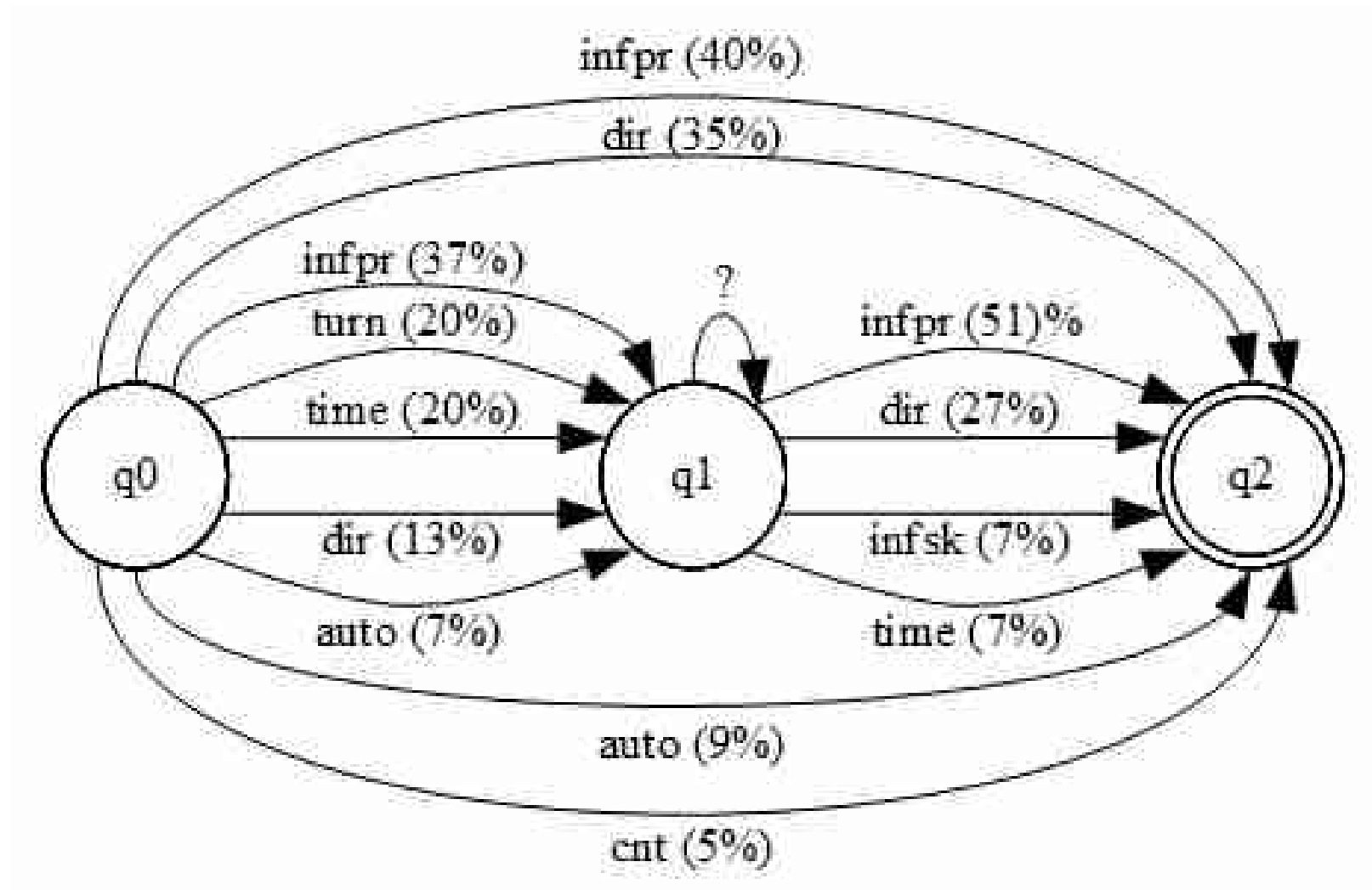
# Model nakładający się



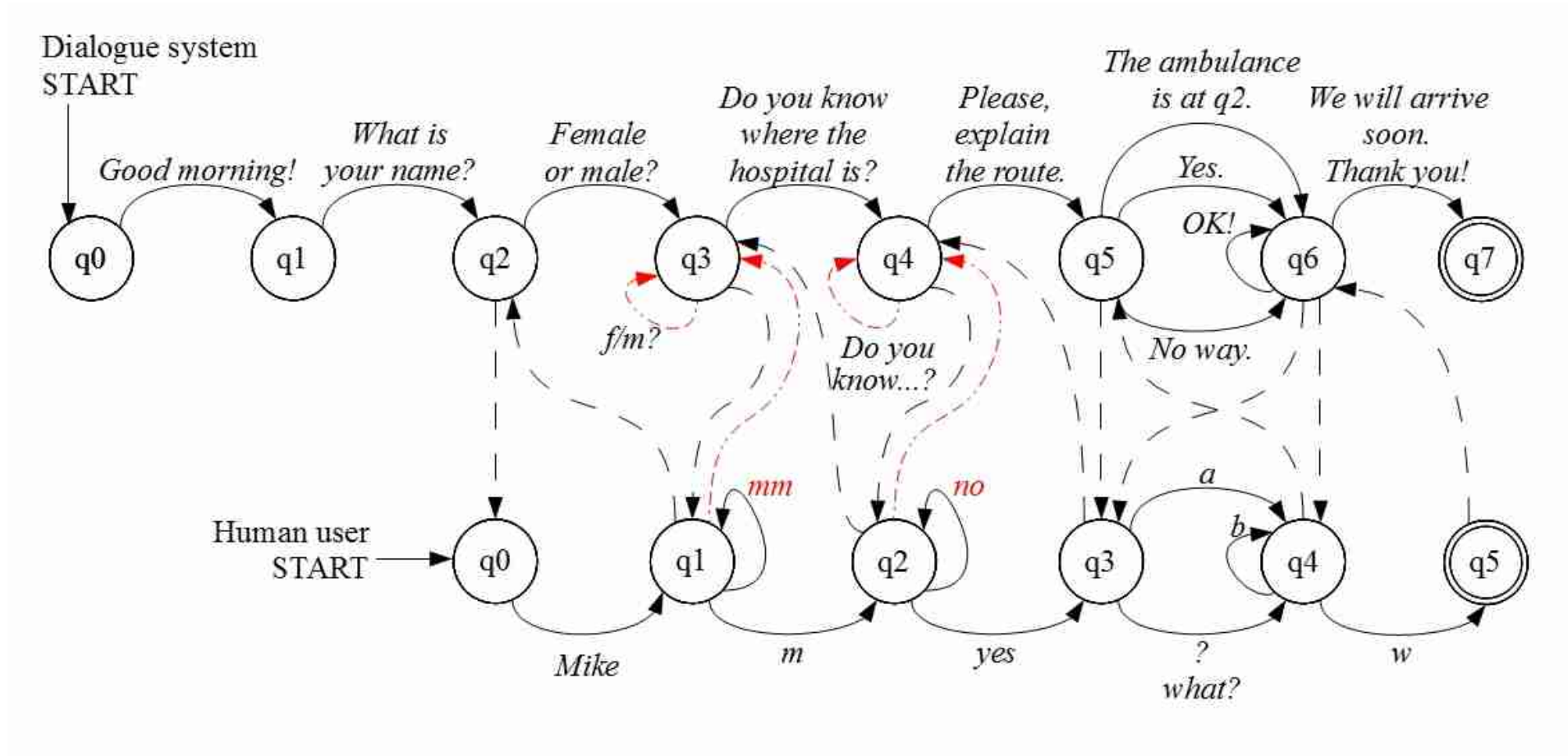
# Speaker 1



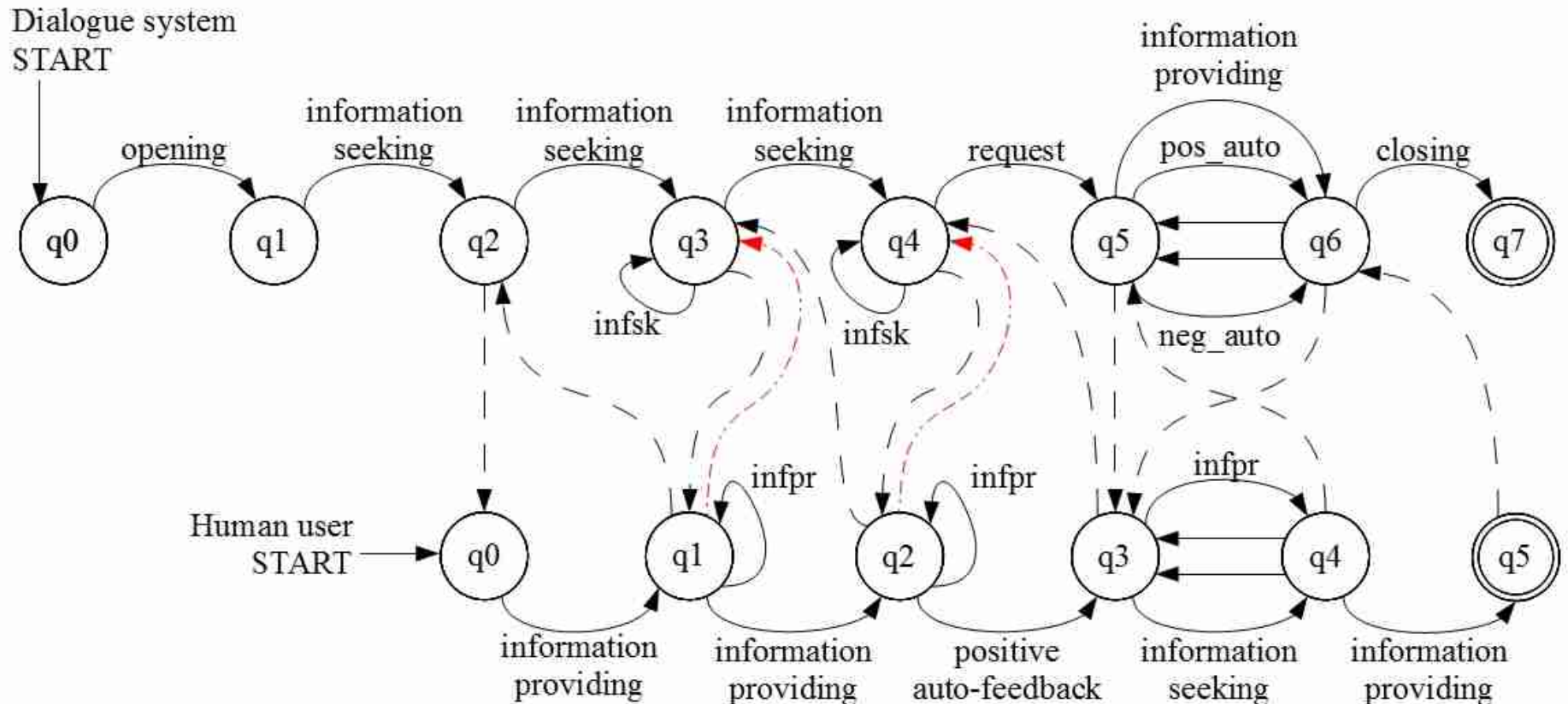
# Speaker 2



# Narysuj automat oparty na Twoim dialogu



# Narysuj automat oparty na Twoim dialogu

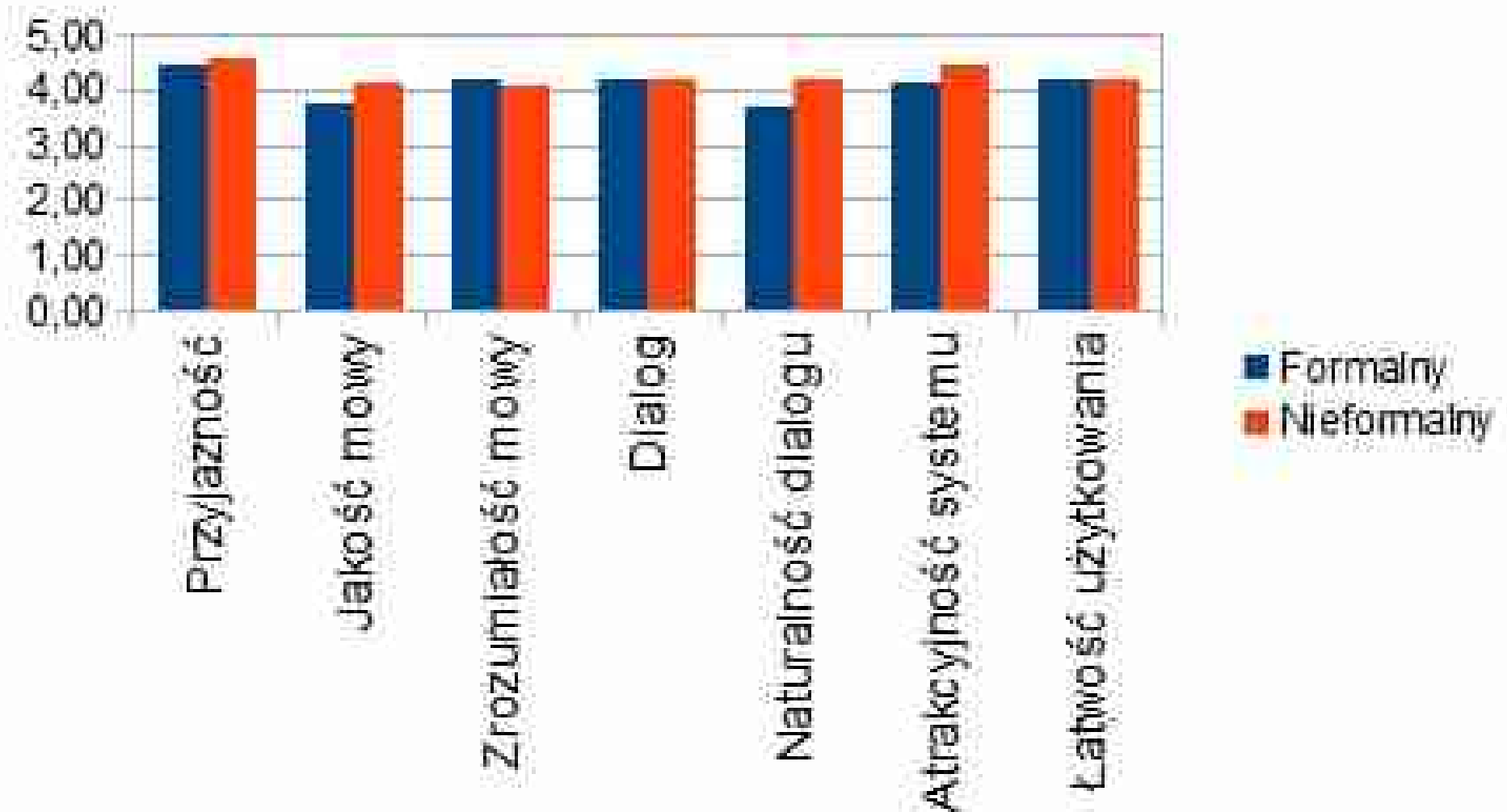


# Przetestuj swój automat

- <http://wwwhomes.uni-bielefeld.de/gibbon/Forms/Python/FSM/jb01a.html>



# Graficzna prezentacja wyników (Przypominam o ewaluacji systemu!) MOS – mean opinion score



Do zobaczenia za tydzień!