DAMSL: Dialog Act Markup in Several Layers

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SoSe 07

- Literature
  James Allen and Mark Core (1997): Draft of DAMSL: Dialog Act Markup in Several Layers
- Preliminaries
  - two participants (speaker and listener)
  - task-oriented dialogs
  - a dialog is divided into turns
  - a turn may consist of several utterances
  - the tag(s) of an utterance is(are) based on the speaker's intentions

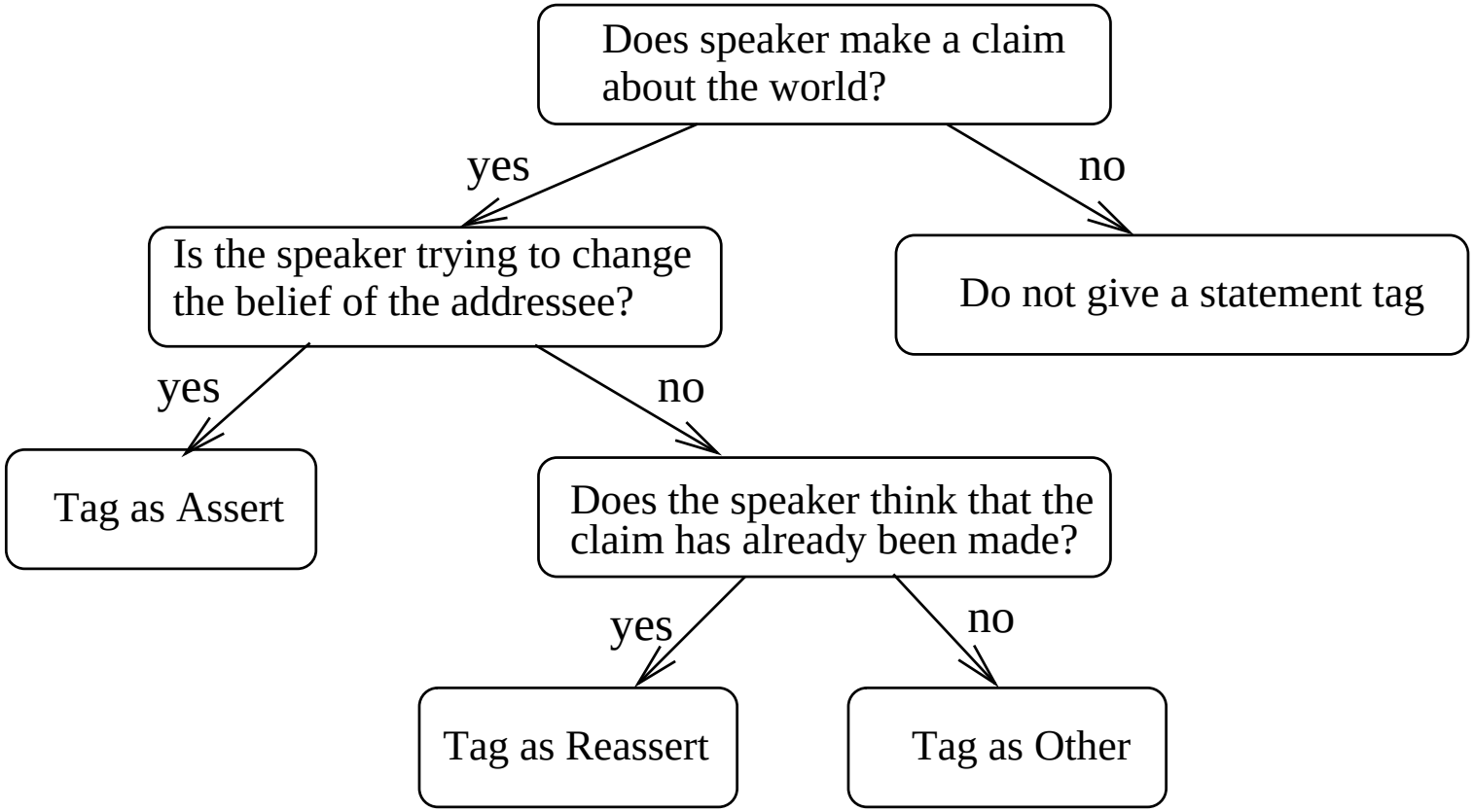
- Dimensions of utterance tags
  - Communicative Status – records whether the utterance is intelligible and whether it was successfully completed
  - Information Level – a characterization of the semantic content of the utterance
  - Forward Looking Function – how the current utterance constraints the future beliefs and actions of the participant
  - Backward Looking Function – how the current utterance relates to the previous discourse

- Communicative status
  - Uninterpretable
  - Abandoned
  - Self-talk

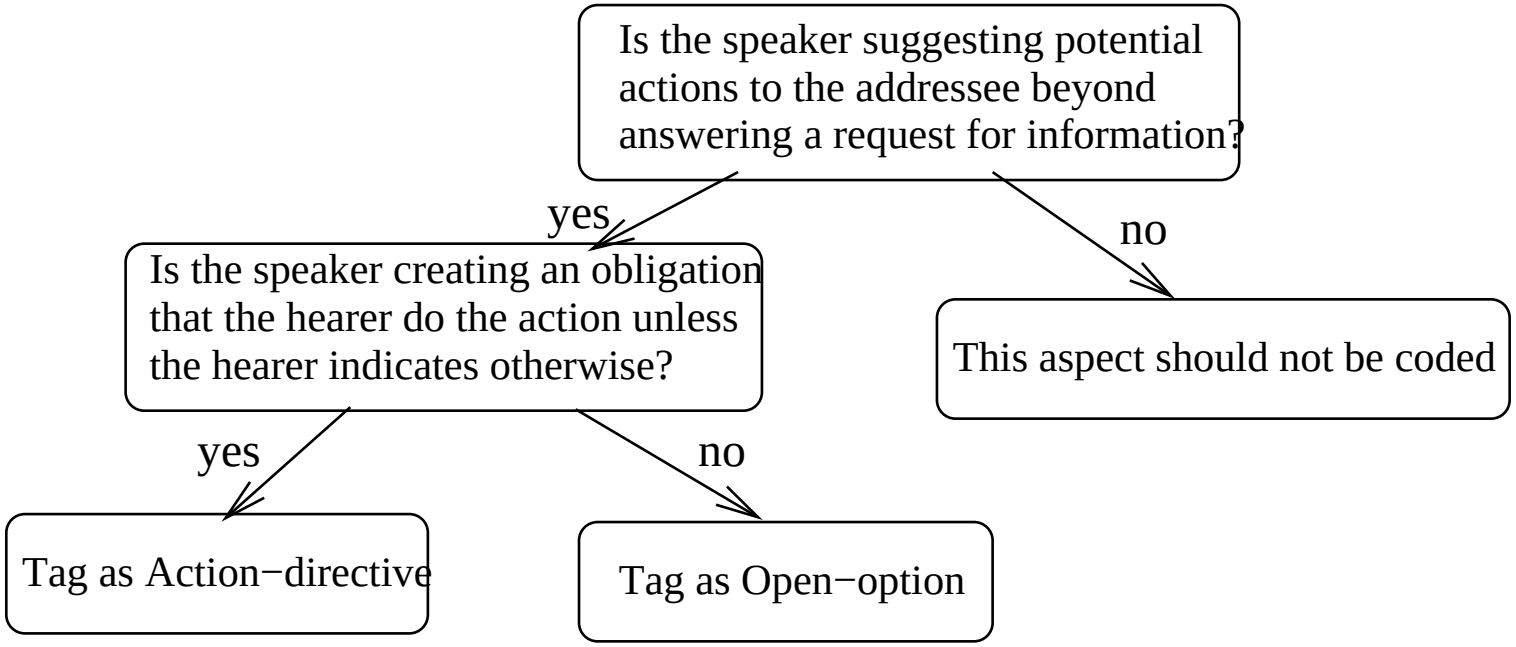
Abandoned	utt1	u	so I pick up
	utt2	u	can I take oranges um on tankers from Corning

- Information level
  - Task (“Doing the task”)
  - Task-management (“Talking about the task”)
    e.g., “Forget about that problem for a while”, “Are we done?”
  - Communication-management (“Maintaining the communication”)
    e.g., “hello”, “ok”, “let’s see”
  - Other-level

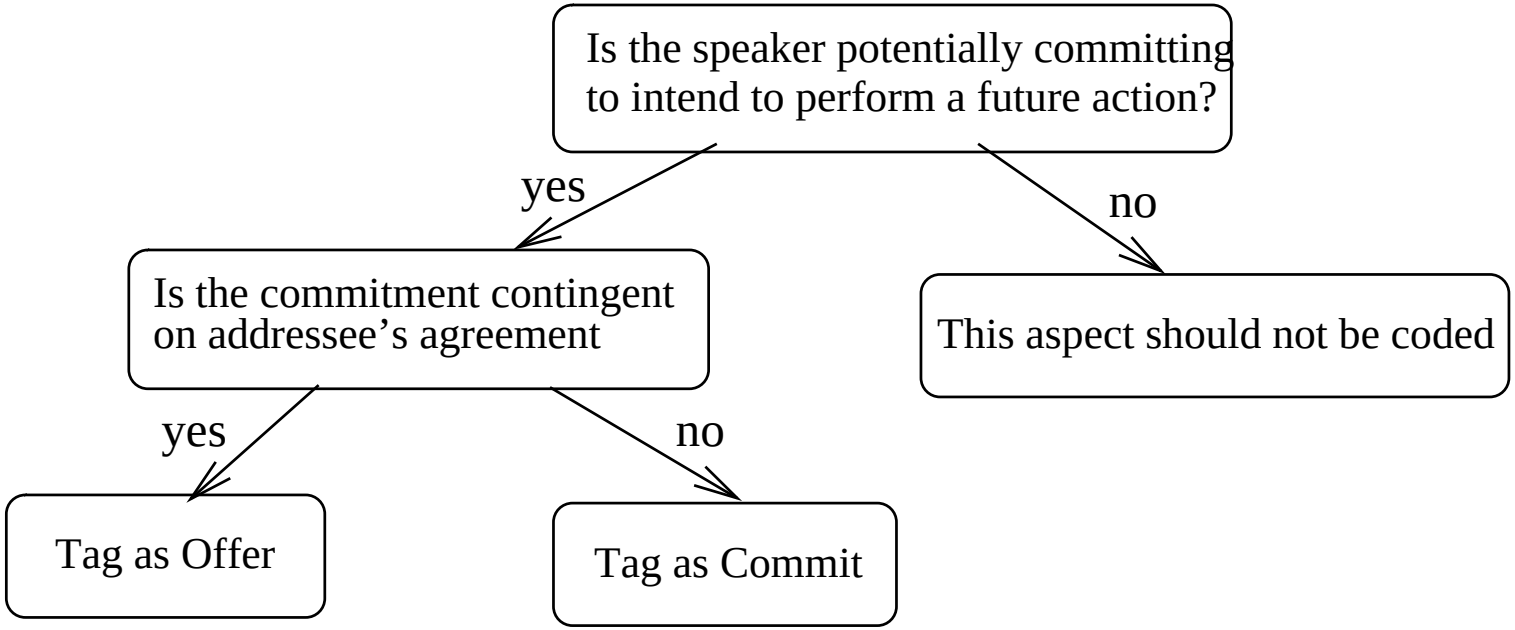
- Forward Looking Function characterizes what effect an utterance has on the subsequent dialogue
  - Statement
    - Assert
    - Reassert
    - Other-statement



- Influencing-addressee-future-action
  - Open-option
  - Action-directive



- Info-request
- Committing-speaker-future-action
  - Offer
  - Commit

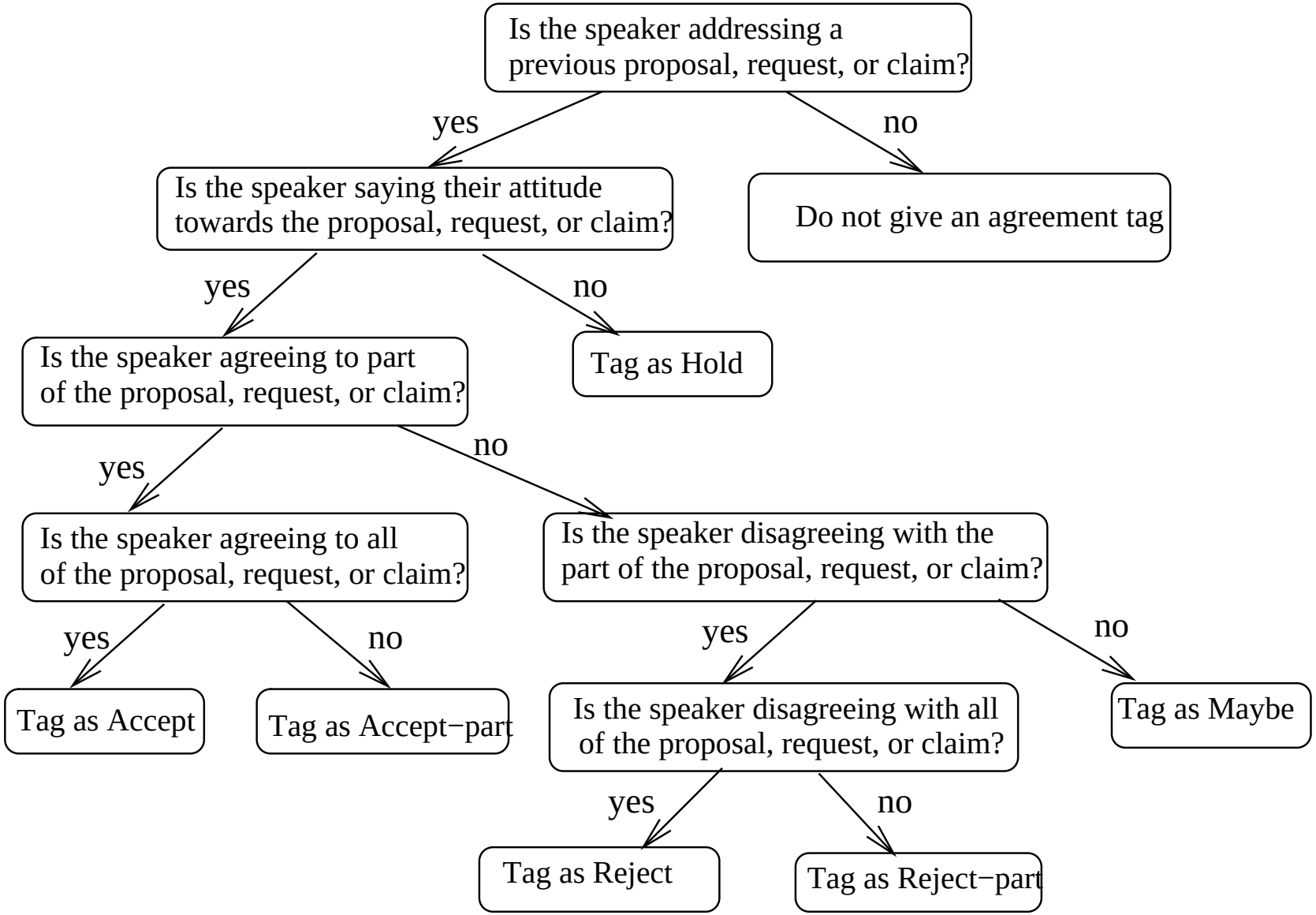


- Conventional
  - Opening
  - Closing
- Explicit-performative
- Exclamation
- Other-forward-function

Action-directive	utt1	A	Let's buy the living room furniture first
Commit	utt2	B	OK
OO, Assert, Offer	utt3		I have a red sofa for $150 or a blue one for $200

Assert	utt1	A	I don't know what to do Saturday night
OO	utt2	B	You could go to Bob's party with me
Commit	utt3	A	Great I'll see you there

- Backward Looking Function indicates how current utterance relates to the previous discourse.
  - Agreement
    - Accept
    - Accept-part
    - Maybe
    - Reject-part
    - Reject
    - Hold


Is the speaker addressing a previous proposal, request, or claim?
yes
no
Is the speaker saying their attitude towards the proposal, request, or claim?
Do not give an agreement tag
yes
no
Is the speaker agreeing to part of the proposal, request, or claim?
Tag as Hold
yes
no
Is the speaker agreeing to all of the proposal, request, or claim?
Is the speaker disagreeing with the part of the proposal, request, or claim?
yes
no
yes
no
Tag as Accept
Tag as Accept−part
Is the speaker disagreeing with all of the proposal, request, or claim?
Tag as Maybe
yes
no
Tag as Reject
Tag as Reject−part

- Understanding
  - Signal-non-understanding
  - Signal-understanding
    - Acknowledge
    - Repeat-rephrase
    - Completion
  - Correct-misspeaking
- Answer
- Information-relation

Assert	utt1	C	I need to travel in May.
Info-request, Ack	utt2	A	And, what day in May did you want to travel?
Assert, Answer	utt3 utt4	C	Ok uh I need to be there for a meeting that's from the 12th to the 15th.
Info-request, Ack	utt5	A	And you're flying into what city?
Assert, Answer	utt6	C	Seattle.
Info-request, Ack	utt7	A	And what time would you like to leave Pittsburgh?
Hold	utt8	C	Uh hmm I don't think there's many options for non-stop.
Accept, Ack	utt9	A	Right.
Assert	utt10		There's three non-stops today.
Info-request	utt11	C	What are they?
Assert, OO	utt12	A	The first one $\cdots$. The second flight departs PGH at 5:55pm, arrives Seattle at 8pm. $\cdots$
Accept, Ack	utt13	C	OK I'll take the second flight on the 11th.
Info-request, Ack	utt14	A	On the 11th? OK. Departing at 5:55pm arrives Seattle at 8pm, U.S. Air flight 115.
Ack	utt15	C	OK.

- Multi-dimensional problems

Task	utt1	u	take the boxcar to Corning
Task, Accept	utt2	s	okay

Task-Management	utt1	u	let's work on the oranges plan first
Task-Management, Accept	utt2	s	okay