Summary of DAMSL: Dialogue Act Markup in Several Layers

1 Preliminaries

A dialog is a spoken, typed or written interaction in natural language between two or more agents. This scheme was developed primarily for two-agent task-oriented dialogs, in which the participants collaborate to solve some problem.

A dialog is divided into units called turns, in which a single speaker has temporary control of the dialog and speaks/writes for some period of time. Within a turn, the speaker may produce several spoken or typed utterance units. While there are many possible ways to define utterances, here we based the notion of utterance on an analysis of the intentions of the speaker (the speech act). For each utterance, the annotation involves making choices along several dimensions, each one describing a different orthogonal aspect of each utterance unit.

2 Utterance Tags

Utterance tags can be classified into four main categories:

- 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 constrains the future beliefs and actions of the participants, and affects the discourse.

- Backward Looking Function: how the current utterance relates to the previous discourse.

Note that utterances do not need to always have a component at each level. For instance, some utterances may have no Forward Looking Function, while others might have no Backward Looking Function.

2.1 Communicative Status

- Uninterpretable
- Abandoned
- Self-talk

2.2 Information Level

- Task ("Doing the task"): utterances that involve performing the task that is the reason for the dialog and directly move ahead (or attempt to move ahead) the goals of the domain.

- Task-management ("Talking about the task"): utterances that address the problem solving process and experimental procedure. This includes utterances that involve coordinating the activities of the two speakers (e.g. "Are you keeping track of the time?", "Let's work on getting the train to Avon first"), asking for help on the procedures (e.g. "Do I need to state the problem?") or asking about the status of the process (e.g. "Are we done?").

- Communication-management ("Maintaining the communication"): Utterances at this level include conventional phrases that maintain contact, perception, and understanding, including greetings, closings, acknowledgments, stalling for time (e.g. "Okay", "Let me see"), or signals of speech repairs or misunderstandings ("oops", "sorry?", "huh?"). They also might address the communication process explicitly, say to establish the communication channel (e.g. "Are you there?", and answering with "I'm here"), to address communication problems (e.g. "I didn't hear/understand what you said"), or to explicitly manage delays or maintain the turn (e.g., "Wait a minute").

- Other-level

2.3 Forward Looking Function

- Statement:a claim made by the speaker

- Info-request: any utterance that creates an obligation for the hearer to provide information

- Influencing-addressee-future-action

  - Open-option: a weak suggestion or listing of options
  - Action-directive: an actual command

- Committing-speaker-future-action

  - Offer: speaker offers to do something, (subject to confirmation)
  - Commit: speaker is committed to doing something

- Conventional: greetings, farwells, thanking and responding to thanks

- Other

2.4 Backward Looking Function

- Agreement

  - Accept: accepting the proposal
  - Accept-part: accepting some part of the proposal
  - Maybe: neither accepting nor rejecting the proposal
  - Reject-part: rejecting some part of the proposal
  - Reject: rejecting the proposal
  - Hold: putting off response, usually via subdialogue

- Answer: utterances complying with an info-request action

- Understanding

  - Signal-non-unders.: speaker didn't understand
  - Signal- understanding': speaker did understand
    * Ack: demonstrated via continuer or assessment
    * Repat-rephrase: demonstrated via repetition or reformulation
    * Completion: demonstrated via collaborative completion