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# Dialogue Acts in VERBMOBIL

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# Chapter 1

# Introduction

In the first phase of the VERBMOBIL project ('93–'94) several project partners worked on different aspects of dialogue acts. In Spring '94 a meeting was held, in which dialogue acts were discussed in detail and a common terminology was proposed (see [7] for a presentation of these results). For several reasons, which we will discuss in more detail below, a 'restandardization' of the dialogue acts to be used in VERBMOBIL became necessary, however. In order to achieve such a restandardization, it was decided to organize a small meeting, in which all groups working on dialogue acts would be represented.

The main part of this report contains detailed descriptions of the dialogue acts agreed upon during this meeting, thereby updating the presentations in [7] and [14]. To put our general understanding of dialogue acts into perspective, we also describe briefly the general context of VERBMOBIL and the different uses of dialogue acts in the VERBMOBIL system. In doing so we refer the interested readers to the respective publications which describe these applications in more detail.

## 1.1 VERBMOBIL - A brief overview

VERBMOBIL combines the two key technologies speech processing and machine translation. The long-term goal of this project is the development of a prototype for the translation of spoken dialogues between two persons who want to find a date for a business meeting (for more detail on the objectives of VERBMOBIL see [16]). A special characteristic of VERBMOBIL is that both participants are assumed to have at least a passive knowledge of English

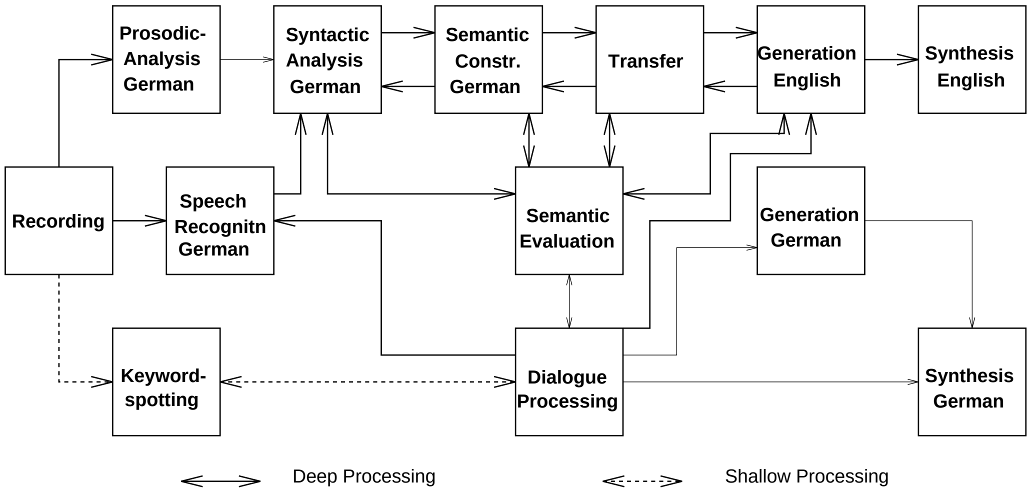


Figure 1.1: Architecture and control flow of the VERBMOBIL system.

which is used as intermediate language. Translations are produced *on demand* so that only parts of the dialogue are processed. Therefore the system distinguishes between two processing modes (see also figure 1.1):

- *Deep Processing* when one of the dialogue participants requests a translation. In this case the input goes through phases of speech recognition, syntactic and semantic analysis, dialogue processing, transfer, re-generation and synthesis, delivering spoken output in the target language.

- *Shallow Processing* when both dialogue participants interact in the same language without the necessity for translation. In order to follow the dialogue superficially a key word spotter examines the input for cue words which are characteristic for certain dialogue steps.

The underlying dialogue model (see [1]), which describes the expected actions of the participants in an appointment scheduling dialogue, is composed of dialogue acts (see e.g. [3]). Our model can be compared to numerous state of the art approaches for spoken dialogue systems, as e.g. the dialogue models of the systems EVAR [9] and SUNDIAL [2]. A model based on dialogue acts seems to be an appropriate approach also from the point of view of machine translation theory (see [5]) and of transfer in particular (see [13]): While in written discourse sentences can be considered the basic units of transfer, this assumption is not valid for spoken dialogues. In many cases only sentence fragments are uttered, which often are grammatically incomplete or even incorrect. Therefore different descriptive units have to be chosen. In the case of VERBMOBIL these units are dialogue acts.

## 1.2 The Purpose of This Document

This paper follows a number of preceeding documents (see [7] and [14]) which give a description of speech acts, or so-called *Sprechhandlungen* which are used to model appointment scheduling dialogues as occurring in the VERBMOBIL domain. We describe an extended and structured set of dialogue acts which will be used for future applications in VERBMOBIL.

An update of the set of dialogue acts as proposed here was necessary for a number of reasons:

- *adaptability*

  Some of the dialogue acts used for the last prototype of VERBMOBIL are rather domain-dependent and cannot be applied to other domains. This concerns in particular such dialogue acts which refer to the negotation of an appointment, rather than to the negotiation in general. For example, the last set of dialogue acts includes an act called INIT_TERMINABSPRACHE, which is used to circumscribe utterances, where a dialogue partner indicates that he wants to make one or more appointments. This means, the topic of negotiation is introduced, which in the VERBMOBIL domain is an appointment. For an extension of the VERBMOBIL application for a treatment of other types of negotiation such a tight coupling between dialogue acts and domain-specific concepts has to be prevented; or rather, we have to provide a level of description which allows a specification of dialogue acts in an abstract and domain-independent way. By adopting this method our model can be easily adapted for different domains.
  Such an approach also leaves us with a set of dialogue acts which are of mostly illocutionary nature. For the abovementioned example this means that we specified a general act INIT, which covers all utterances that introduce the topic of negotiation.

- *coverage*

  When annotating a set of ca. 200 transcribed human-human appointment scheduling dialogues from our corpus it became clear, that some of the rather social phenomena occurring in dialogues are not covered sufficiently. Especially for the purposes of translation it is necessary to clearly separate between phenomena contributing to the progress of the negotiation process as such and phenomena that only indicate the management of the conversation. A typical example is the particle *ja* which depending on its function can be either translated as *yes* or as *well*. For the latter case we introduced a new type of dialogue act which in analogy to a similar class in [4] we call FEEDBACK.

- *multi-functionality*

  To account for the fact that within VERBMOBIL dialogue acts serve a number of quite different purposes (see Section 2) it became necessary to include also domain-dependent dialogue acts, which are modelled as refinements of the more abstract types mentioned above. Consequently, these dialogue acts are more propositioally biased. To take the introduction of a topic of negotiation as an example again, we specified INIT_DATE to cover the introduction of a meeting as topic to be negotiated and INIT_LOCATION to describe the introduction of a meeting point as topic of negotiation. While the latter has only rarely occurred in the initial VERBMOBIL scenario it is crucial for the extended scenario of travel planning. Both dialogue acts are subcategories of INIT, with which they share their illocutionary potential.

- *comprehensibility of labels*

  In the initial proposal in [7] and [14] the dialogue act labels are in German, which is very inconvient for a broader than national dissemination of our model. Since also the emerging English translations of these labels into English varies considerably there is a need for standardized English labels. These English labels together with their German correspondences are given in tables 3.1 and 3.2. We also tried to render the new dialogue act labels more mnemonic by adopting a more principled naming method: the English labels correspond to English verbs (e.g. INTRODUCE, SUGGEST), while the German labels correspond to nouns (VORSTELLUNG, VORSCHLAG). Subcategories of dialogue acts are formed by adding an application-specific label (e.g. INTRODUCE_NAME, INTRODUCE_REACT, INTRODUCE_POSITION, SUGGEST_EXCLUDE_DURATION, etc.).

In the remainder of this paper we will first give an outline of the various functions dialogue acts fulfill in the framework of the VERBMOBIL system since both the type and the amount of dialogue acts depend on the use of these acts. Then we will list the individial dialogue acts, explaining their meaning and giving examples for their use.

# Chapter 2

# The Use of Dialogue Acts in VERBMOBIL

It should be noted that dialogue acts are used in the VERBMOBIL system by different components. Though these components share a basic understanding of dialogue acts, they have slightly different perspectives wrt details. In the current version of the system, we can distinguish at least three main applications of dialogue acts:

1. the determination of dialogue acts for Englisch utterances based on keywords (Erlangen);

2. the determination of dialogue acts for German utterances based on micro- and macro-structural information (Berlin);

3. the use of dialogue acts in the dialogue component (Saarbrücken).

The project group KIT-VM11 has implemented a component which determines the dialogue act performed by an utterance [14, 15]. This determination is based on conventions pertaining on two complementary levels. There are conventions that determine which syntactic and semantic structures can be used in order to express a certain dialogue act. This is rather local or *micro-structural* information, since here the focus is on a single utterance. There are other conventions concerning the global structure of the dialogue. They express preferences for the type of the next dialogue act on the basis of the *macro structure* of the dialogue.

Technically, the determination of dialogue acts uses the strategy of *preferential interpretation* [10] and is based on the FLEX system [11]. The basic

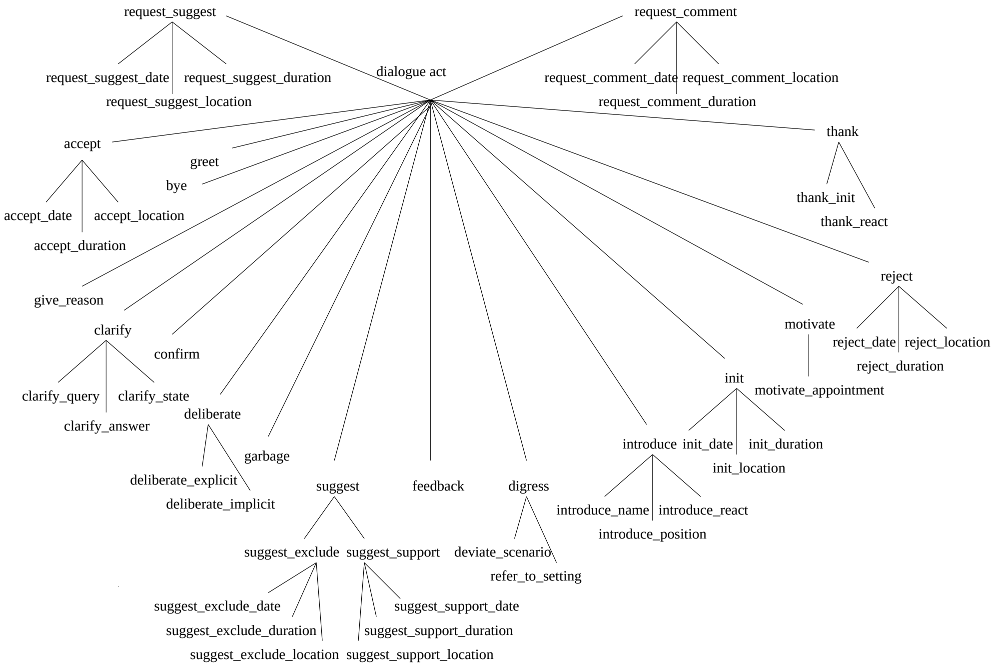


Figure 2.1: Taxonomie of dialogue acts as used in VERBMOBIL.

idea is to homogeneously model preference rules, which take into account information from various sources, e.g. syntax, semantics, world knowledge. The respective degree of relevance of these rules is captured by the notion of *weighted defaults* [12]. Given this formal framework, the dialogue acts are hierarchically modeled in the FLEX system as shown in Figure 2.1. It should be noted that most dialogue acts are modeled as being disjoint. Since this is only relevant for the evaluation of defaults, however, we will not address this issue in the following.

Dialogue act information is used by the dialogue processing component to track the progress of the negotiation process and to construct the dialogue memory which provides a representation of contextual information.

The dialogue acts as determined by the semantic evaluation component are processed by the following three modules of which the dialogue processing component consists:

- *a statistics module:*
  this subcomponent, which has been trained on a corpus of appointment scheduling dialogues annotated with dialogue acts, computes predictions for follow-up dialogue acts; these predictions are used, for example, to constrain the set of key words to be expected;

- *a finite state machine (*FSM*):*
  this subcomponent provides an efficient implementation of our dialogue model which describes the potential sequences of dialogue acts that can be expected in appointment scheduling dialogues. The FSM checks an incoming dialogue act for compatibility with this dialogue model.

- *a plan recognizer:*
  this module incorporates another knowledge-intensive implementation of the dialogue model which also takes contextual and pragmatic constraints into account. For processing a dialogue, so-called *plan operators* have been defined which are specialized to treat specific events. The application of plan operators depends on contextual and pragmatic conditions. Once a plan operator is applied it can initiate follow-up actions, as e.g. an update of parts of the dialogue memory. The plan operators cover various levels of abstraction – at the lowest level plan operators are specialized for the treatment of one single dialogue act.

During phases of shallow processing a key word spotter is used to keep track of the ongoing dialogue. The keywords which can be recognized by this component are used to identify the dialogue acts. The keywords for the recognition of dialogue acts are extracted from a corpus of dialogues in the VERBMOBIL szenario with two methods (see [8]). First some keywords which are characteristic for certain dialogue acts are extracted manually. Then Semantic Classification Trees (SCTs) (see [6]) are used to classify dialogue acts. By this algorithm keywords can be automatically trained and extracted. The two keyword sets, one set determined manually, the other set determined autmoatically by the SCT algorithm, are combined to build up the vocabulary for the keyword spotter.

# Chapter 3

# Translation Table

This table is given in order to facilitate the correspondences between the speech acts described and used in previous documents ([7], [14]) and the dialogue acts defined in this paper.

[1] Dialogue acts indicated with a $\diamondsuit$ are currently not used in VM since they cannot be distinguished easily from other dialogue acts if only their linguistic realization is taken into account. They are included in this list, however in case they may be of future use.

| | |
|---|---|
| **accept** | Akzeptanz |
| accept_date | Akzeptanz_Termin |
| accept_duration | Akzeptanz_Dauer |
| accept_location | Akzeptanz_Ort |
| **bye** | Verabschiedung |
| **clarify** | Information |
| clarify_answer | Explizite_Klärungsantwort |
| clarify_query | Implizite_Klärungsantwort |
| clarify_state | Klärungsfrage |
| **confirm**$\diamondsuit$[1] | Bestätigung |
| **deliberate** | Deliberation |
| deliberate_explicit | Explizite_Deliberation |
| deliberate_implicit | Implizite_Deliberation |
| **digress** | Abweichung |
| deviate_scenario | Abweichung_Szenario |
| refer_to_setting | Bezugnahme_Setting |
| **feedback** | Rückmeldung |
| **garbage** | Rest(Müll) |
| **give_reason** | Begründung |
| **greet** | Begrüssung |
| **init** | Init |
| init_date | Init_Termin |
| init_duration | Init_Dauer |
| init_location | Init_Ort |
| **introduce** | Vorstellung |
| introduce_name | Vorstellung_Name |
| introduce_position | Berufliche_Position |
| introduce_react | Vorstellung_Reaktion |
| **motivate** | Motivation |
| motivate_appointment | Motivation_TA |

Table 3.1: Part 1

| | |
|---|---|
| **reject** | Ablehnung |
| reject_date | Ablehnung_Termin |
| reject_duration | Ablehnung_Dauer |
| reject_location | Ablehnung_Ort |
| **request_comment** | Aufforderung_Stellung |
| request_comment_date | Aufforderung_Stellung_Termin |
| request_comment_duration | Aufforderung_Stellung_Dauer |
| request_comment_location | Aufforderung_Stellung_Ort |
| **request_suggest** | Aufforderung_Vorschlag |
| request_suggest_date | Aufforderung_Vorschlag_Termin |
| request_suggest_duration | Aufforderung_Vorschlag_Dauer |
| request_suggest_location | Aufforderung_Vorschlag_Ort |
| **suggest** | Vorschlag |
| suggest_exclude | Negativer_Vorschlag |
| suggest_exclude_date | Negativer_Vorschlag_Termin |
| suggest_exclude_duration | Negativer_Vorschlag_Dauer |
| suggest_exclude_location | Negativer_Vorschlag_Ort |
| suggest_support | Positiver_Vorschlag |
| suggest_support_date | Positiver_Vorschlag_Termin |
| suggest_support_duration | Positiver_Vorschlag_Dauer |
| suggest_support_location | Positiver_Vorschlag_Ort |
| **thank** | Dank |
| thank_init | Dank_Init |
| thank_react | Dank_Reaktion |

Table 3.2: Part 2

# Chapter 4

# Dialogue Acts for Appointment Scheduling Dialogues

In this section we describe the various dialogue acts in detail. For each dialogue act we give the following types of information:

- *Illocution*:
  The information given under this heading describes the meaning of the dialogue act and gives an explanation for its use.

- *Subcategorization*:
  Under this label all acts are given which refine the dialogue act under consideration. The subcategorization principle leads to a hierarchical taxonomy of dialogue acts which is shown graphically in Figure 2.1.

- *Linguistic Realisation*:
  Here brief German examples are listed which contain cue phrases that typicially occur in utterances belonging to the respective dialogue act type.

- *Full Example(s) English and Full Example(s) German*:
  This section includes full examples for occurrences of the dialogue act which have been taken from our corpus of appointment scheduling dialogues. These examples also provide contextual information for utterances of the respective type. The text corresponding to the dialogue

act is printed in boldface, the context in Roman. While the unboxed examples provide dialogue fragements fully annotated with dialogue act information, the boxed examples give dialogue information for the text brinted in boldface only.

# Accept

- Illocution: A <u>T</u>opic <u>O</u>f <u>N</u>egotiation (TON) is being accepted.
- Subcategorization
  1. accept_date: A date is being accepted.
  2. accept_location: A meeting point is being accepted.
  3. accept_duration: The duration of a meeting is being accepted.
- Linguistic Realisation:
  JA DAS PASST MIR,
  *ja, zwanzigster März ist gut*
  *ja wär ich mit einverstanden,*
  *ja sollte mir recht sein,*
  *ja gut.*

- Full Examples - English

  DIALOG mcar_ffmw_6:

| | | |
|---|---|---|
| ffmw_6_10: | *no Friday I'm booked all day with meetings and classes* | suggest_exclude_date |
| | *would you mind working on Saturday* | suggest_support_location |
| mcar_6_11: | **Saturday sounds fine** | accept_date |

QUELLE: TP 13 GESPRÄCH NR. 21

| | | |
|---|---|---|
| GRA | 000 : | Thursday and Friday, the second and third of June. |
| HEL | 001 : | ⟨Papierrascheln⟩ Mmh. ⟨leise⟩ ⟨Papierrascheln⟩ ⟨3s⟩ Yes, I think that will be fine. ⟨ehm⟩ I don't have anything going on then. |

- Full Example - German

QUELLE: N009K.TRL

| | | |
|---|---|---|
| PS1 | 019 : | allerdings könnte ich ⟨P⟩um elf noch einen Termin reinschieben. |
| HM1 | 020 : | **ja ich glaube das wär' bei mir auch in Ordnung.**⟨P⟩machen wir's so ? |

# Bye

- Illocution: A dialogue partner says good-bye to the other dialogue partner. **bessere Uebersetzung ? -em**
- Linguistic Realisation:
  *Auf Wiedersehen, schön bis dann*
- Full Example - English

  DIALOG mdkr_fcaw_1:

| | | |
|---|---|---|
| fsam_2_04 | *three o'clock is great* | accept_date |
| | **see you then** | bye |
| fsam_2_06 | **alright bye** | bye |

- Full Example - German and English

| QUELLE: TP 13 GESPRÄCH 20 | | |
|---|---|---|
| BOB | 000 : | **Bye.** |
| VOL | 001 : | **Auf Wiedersehn.** ⟨4s⟩ |

# Clarify

- Illocution: Information is being delivered or an information deficit is being stated.
- Subcategorization
  1. clarify_answer: Missing information is being conveyed after an information deficit has been stated previously.
  2. clarify_state: Missing information is being conveyed without an request being made previously.
  3. clarify_query: An information deficit is being stated.
- Linguistic Realisation:
  *meinen sie jetzt zehn Uhr fünfzehn oder elf Uhr fünfzehn,*
  *ist das der achte April.*
- Full Example - English DIALOG menm_ffmw_7:

| | | |
|---|---|---|
| ffmw_7_06: | **okay do you mean Tuesday the twenty third** | clarify_query |
| | **yes I do Tuesday November twenty third eight to ten AM** | clarify_answer |

- Full Example - German

| QUELLE: N002K.TRL | | |
|---|---|---|
| MW1 | 004 : | ⟨;T⟩ vorschlagen am sechzehnten April ⟨ah⟩ ⟨A⟩. Käse, ich meine ⟨!1 mein⟩ naturlich März. |
| PS1 | 005 : | **das ist ein Dienstag oder**. |
| MW1 | 006 : | **richtig das ist ein Dienstag .** |

# Confirm

- Illocution: The result of the negotiation process is being confirmed. This dialogue act is no longer used for the annotation of transcribed dialogues. since it overlaps significantly with the dialogue act ACCEPT. It might be possible though, that in future VM versions CONFIRM will be necessary for the transfer of various levels of politeness and for the exact determination of the dialogue phase to which an utterance belongs.

- Full Example - English

| QUELLE: TP 13 GESPRÄCH 31 | | |
|---|---|---|
| CHR | 022 : | ⟨23s⟩ That's fine. Munich is far away. Let's meet at eight o'clock at my place. |
| BIL | 023 : | ⟨P⟩Okay, that would be wonderful.**So I will see you again on the fourteenth of June.** |

## Deliberation

---

- Illocution: By means of a DELIBERATION one dialogue partner signals to the respective other dialogue participant that he still participates in the interaction but that he executes a sideline action in order to be able to continue the conversaton.

- Subcategorisation:

  1. deliberate_explicit: By means of an explicit deliberation the dialogue partner briefly leaves the appointment negotiation in order to verify a date. A DELIBERATE_EXPLICIT can be introduced by an **apology**.

  2. deliberate_implicit: This dialogue act is used to model imitations / repetitions of previous utterances or to describe monologues (loud thinking) by one dialogue partner. This distinction is not treated in the current VM setting.

- Linguistic Realisation:
  *Da muß ich mich mal ganz scharf konzentrieren, weil ich jetzt meinen Stundenplan noch nicht so genau im Kopf habe.*
  *Moment, da müßt' ich grad 'n mal kucken.*

- Full Examples - English DIALOG flmb_mkps_6:

| | | |
|---|---|---|
| mkps_6_02: | *yes* | feedback |
| | *so in the next two weeks when can you meet* | request_suggest_date |
| flmb_6_03 | **let me check my calendar here** | deliberate_explcite |
| | **we're on the twenty fourth** | deliberate_implicite |
| | *well the twenty seventh I have class from nine twelve* | suggest_exclude_date |
| | ... | |

| Quelle: TP 13 Gesprräch 39 | | |
|---|---|---|
| HAM | 025 : | ⟨%⟩/- ⟨P⟩ Umm ⟨P⟩ well , ⟨P⟩ I have ⟨P⟩ +/Tuesday/+ on Tuesday , Wednesday ⟨P⟩and Friday I have the whole day free . |
| PIL | 026 : | ⟨P⟩ **Hm ⟨P⟩ ⟨:⟨;murmelnd⟩ Tuesday , Wednesday and Friday:⟩.** ⟨P⟩ Dann würde ich doch sagen , am Freitag , ⟨P⟩ dem ⟨P⟩ sechsten Mai ⟨P⟩ würde das gut passen . Vielleicht so gegen ⟨P⟩ neunzehn Uhr ? |
| GRA | 027 : | ⟨P⟩ %Then on Friday , May sixth around seven ? |

- Full Example - German

| Quelle: N009K.TRL | | |
|---|---|---|
| PS1 | 001 : | Ja es würde mich freuen wenn wir dann noch einen Termin ausmachen . Wann wär's Ihnen denn recht ? |
| HM1 | 002 : | **Ja ⟨Z⟩ ich weiß nich' so recht,** wie wär's denn ⟨Z⟩ im Juli? |

# Digress

- Illocution: Digressions occur when a dialogue participant deviates from the framework or the scenario of the dialogue or when the participant asks questions concerning the system.
- Subcategorization
  1. digress_scenario: The dialogue participant digresses from the initial dialogue setting. Szenarios.
  2. refer_to_setting: The dialogue participant refers to the whole or parts of the setting / the scenario.
- Linguistic Realisation:
  *Und was soll ich jetzt sagen?*
- Full Example - English

  DIALOG fmjm_mdrd_1:

| | | |
|---|---|---|
| mdrd_1_04: | *okay let's do that* | accept_date |
| | *we could meet for lunch at Dave and Andy's* | suggest_support_location |
| | **and eat lots of ice cream** | digress_scenario |
| | **and gain weight** | digress_scenario |

## Feedback

- Circumscription: Elements with a social function, as e.g. to signal that a dialogue partner still follows the dialogue. otherwise.
- Subcategorization:
  1. ????
  2. ??
  3. ??
- Full Example - English

  DIALOG menm_ffmw_7:

| | | |
|---|---|---|
| menm_7_07: | ... | |
| | *Tuesday November twenty third eight to ten AM* | suggest_support_date |
| | *how's that sound to you* | request_state_date |
| ffmw_7_08: | **okay** | feedback |
| | *that's fine* | accept_date |
| | ... | |

- Full Example - German

# Garbage

- Circumscription: Elements not classifyable otherwise.
- Subcategorization:
  1. ????
  2. ??
  3. ??
- Full Examples - English

  DIALOG fjmb_fmlz_6.trans:

| | | |
|---|---|---|
| fjmb_6_07: | **oops I do** | Garbage |
| | *on the first I have a meeting from ten to eleven* | suggest_exclude_date |
| | **but we could meet well no** | Garbage |
| | *if you could meet from say eleven to one on Friday the first* | suggest_support_date |
| | *how would that be* | request_comment_date |

| QUELLE: TP 13 GESPRÄCH 21 | |
|---|---|
| HEL 000 : | Well, **what** ⟨P⟩what ⟨ehm⟩ day at the month would fit best for you? |

# Give_Reason

- Illocution: A reason for the use of a dialogue act is being given. The reason as such can contain further dialogue acts.
- Linguistic Realisation:
  Blaubeurer 7/16
  *da hab' ich schon einen Termin.*,
  *da geh' ich in Urlaub.*.

- Full Example - English

  DIALOG fkcf_mjcb_1:

| | | |
|---|---|---|
| mjcb_1_06: | *that's fine* | accept_date |
| | *how 'bout next Thursday after lunch* | suggest_support_date |
| fkcf_1_07: | *that's not good for me* | reject_date |
| | **because I have meetings all afternoon** | give_reason |

| Quelle: Tp13 Gespräch 24 | | |
|---|---|---|
| GRA | 000 : | What do you think of a date in the week from twenty-forth through twenty-seventh of May? |
| HEL | 001 : | Well, that's going to be a problem, **because ⟨ehm⟩ we have ⟨P⟩a holiday then.** |

- Full Example - German

| Quelle: N002K.TRL | | |
|---|---|---|
| MW1 | 002 : | Wie wär's denn am Dienstag den dreizehnten April vormittags |
| PS1 | 003 : | Tut mir leid, **am dreizehnten April bin ich noch im Urlaub. ⟨P⟩** |

## Greet

- Illocution: A dialogue partner is being greeted.
- Linguistic Realisation:
  *Guten Tag Herr Ciupke*
  A GREET can also be realised informally, as e.g. in
  *ja also, okay.*
- Full Example - English DIALOG fmjm_mdrd_2:

| | | |
|---|---|---|
| fmjm_2_01: | **hello Dan** | greet |
| | *it's me again* | introduce_name |

| QUELLE: TP 13 GESPRÄCH 22 | | |
|---|---|---|
| DAN | 000 : | **Hello,** my name is Daniel Jones, yeah, and it's ⟨P⟩good to be doing business with you. |

- Full Example - German

| QUELLE:TP 13 GESPRÄCH 30 | | |
|---|---|---|
| LIS | 001 : | **Guten Tag,** mein Name ist Lisa Lagemann. ⟨Ehm⟩, ich ⟨!ichch⟩ ⟨P⟩habe gehört, daß wir gemeinsam eine Reise machen werden nach Frankfurt und wollte jetzt mit Ihnen die Termine besprechen. |

# Init

- Illocution: The goal of the negotiation is being introduced.
- Subcategorization
  1. init_date: The goal of negotiation, the scheduling of one or more appointments, is being introduced.
  2. init_location: The goal of negotiation, the determination of one or more locations for a meeting, is being introduced.
  3. init_duration: The goal of negotiation, the determination of the duration for (a) meeting(s) is being introduced.
- Linguistic Realisation:
  *und äh wir solln jetzt demnächst eine Geschäftsreise zusammen machen, hab' ich gehört, und*

- Full Example - English

  DIALOG mcar_ffmw_6:

| | | |
|---|---|---|
| mcar_6_01: | *okay well* | feedback |
| | *looks like we're running short on time* | clarify_state |
| | **and we're gonna have to schedule a meeting sometime in the next two weeks** | init_date |

| Quelle: N002K.TRL | | |
|---|---|---|
| PS1 | 001 : | schön hervorragend, **dann lassen Sie uns doch noch ein' Termin ausmachen**⟨P⟩. wann wär's Ihnen denn recht |

- Full Example - German

| Quelle: TP 13 Gespräch 21 | | |
|---|---|---|
| HEL | 000 : | My name is Helen Douglas, and ⟨ehm⟩ ⟨P⟩**I wanted to make an appointment with you ⟨P⟩for ⟨P⟩⟨ähm⟩ a ⟨P⟩for a con ⟨P⟩to go to a conference in Frankfurt.** ⟨P⟩I was doing a computer software ⟨%⟩x. |

# Introduce

- Illocution: The dialogue partner introduces himself.
- Subcategorization
  1. introduce_name: A dialogue partner introduces himself.
  2. introduce_react: A dialogue partner reacts on the introduction of the respective other dialogue partner.
  3. introduce_position: A dialogue partner describes his position.
- Linguistic Realisation:
  *Ich komm' von der Maas Organisation.*
  *ich bin Mitarbeiter.*
  *Ja, mein Name is' Bulla.,*
  *ich bin der Peter Beham..*
  *angenehm,*
  *nice to meet you.*
- Full Example - English

| | | |
|---|---|---|
| fmjm_2_01: | *hello Dan* | greet |
| | **it's me again** | introduce_name |

- Full Example - English and German

| QUELLE: TP 13 GESPRÄCH 30 | | |
|---|---|---|
| LIS | 001 : | Guten Tag, **mein Name ist Lisa Lagemann.** ⟨Ehm⟩, ich ⟨!ichch⟩ ⟨P⟩habe gehört, daß wir gemeinsam eine Reise machen werden nach Frankfurt und wollte jetzt mit Ihnen die Termine besprechen. |
| GIL | 002 : | ⟨P⟩**I'm Gilbert Sullivan,** it's nice to meet you. ⟨P⟩⟨Ehm⟩ ⟨P⟩looking at my calendar here ⟨6s⟩ I do have time in May ⟨0s⟩. Although May is relatively full. I would have more time in June ⟨P⟩and also in July ⟨3s⟩. And ⟨eh⟩ we could work in a two-day trip during any of those months. |

# Motivate

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- Illocution: The reason for the negotation is being given.
- Subcategorization:
    1. motivate_appointment: The reason for scheduling an appointment is being given.
- Linguistic Realisation:
  *Ich habe gehört, Sie möchten bei uns Software kaufen.*
- Full Examples - English

  DIALOG mdkr_fcaw_1:

| | | |
|---|---|---|
| mdkr_1_01: | *Cindy I was wondering if we could meet again in the next couple of weeks* | init_date |
| | **there's a couple of more things that I'd like to talk about** | motivate_appointment |

| Quelle: TP 13 Gespräch 19 | | |
|---|---|---|
| CHR | 000 : | Do you want to suggest a date? |
| JON | 001 : | ⟨Atmen⟩ ⟨äh⟩ Okay,**we should go to visit our subsidiary in ⟨äääh⟩ ⟨P⟩Munich,** and ⟨äh⟩ ⟨P⟩I would ⟨P⟩suggest that we go as soon as possible. The first ⟨ehm⟩ ⟨2s⟩ ⟨ähm⟩ ⟨P⟩possible day would be ⟨2s⟩ would ⟨P⟩be ⟨P⟩⟨ähm⟩ ⟨4s⟩ on ⟨äh⟩ Thursday ⟨P⟩⟨ähm⟩, we will stay for Thursday and Friday and return on Friday ⟨P⟩evening, that's ⟨äh⟩ ⟨P⟩April twenty-first and ⟨P⟩twenty-second. ⟨P⟩Is it okay with you? ⟨13s⟩ |

| Quelle: TP 13 Gespräch 22 | | |
|---|---|---|
| DAN | 000 : | Hello, my name is Daniel Jones, yeah, and it's ⟨P⟩good to be doing business with you. |
| SUS | 001 : | **And ⟨ehm⟩ ⟨P⟩⟨äh⟩ my secretary told me that you ⟨P⟩⟨ehm⟩ want to have ⟨P⟩some ⟨P⟩informations about ⟨P⟩our ⟨P⟩Leistungen** |
| GRA | 002 : | services |
| SUS | 003 : | **services of our ⟨P⟩⟨äh⟩ firm,** ⟨P⟩so ⟨P⟩⟨ehm⟩ ⟨P⟩maybe it's a good ⟨P⟩⟨ehm⟩ Vorschlag ⟨2s⟩ |
| GRA | 004 : | suggestion |
| SUS | 005 : | suggestion to ⟨äh⟩ make a ⟨P⟩a lunch or a dinner together, so I can ⟨P⟩give you any informations you want. |

# Reject

- Illocution: The TON is being rejeceted.
- Subcategorization
  1. reject_date: A date is being rejected.
  2. reject_location: A meeting point is being rejected.
  3. reject_duration: The duration of a meeting is being rejected.
- Linguistic Realisation
  *Am Donnerstag, den zwölften Mai, kann ich leider nicht,*
  *also Freitag der zweite das paßt mir ganz und gar nich'*
- Full Examples - English

  DIALOG mfrd_fsam_3:

| | | |
|---|---|---|
| mfrd_3_01: | *I'm looking at Monday morning up until two* | suggest_support_date |
| | *in fact I'm free all day Monday except for two to three PM* | suggest_support_date |
| | *what do you think* | request_comment_date |
| fsam_3_02: | **actually this week's really bad for me** | reject_date |

| QUELLE: TP 13 GESPRÄCH NR. 21 | | |
|---|---|---|
| HEL | 000 : | **Well, that's going to be a problem,** because ⟨ehm⟩ we have ⟨P⟩a holiday then. |

- Full Example - German

| QUELLE: N009K.TRL | | |
|---|---|---|
| PS1 | 007 : | sagen wir Dienstag sechster Juli ,da hab' ich noch Zeit. |
| HM1 | 008 : | **äh Dienstag is' etwas ungünstig** ⟨P⟩⟨%⟩ä könnten wir 's vielleicht am Donnerstag machen ⟨%⟩ä ? |

# Request_Comment

---

- Illocution: The dialogue participant is being asked to express his opinion concerning the topic of a suggestion. Most SUGGESTions contain this dialogue act implicitly; REQUEST_COMMENT has been introduced to cover cases where the request is realised **explicitly**. The propositional content of the SUGGESTion is only referred to **implicitly** (e.g. anaphoric and deictic references).

- Subcategorization

  1. request_comment_date: The dialogue participant is being asked to express his opinion with respect to a proposed date.
  2. request_comment_location: The dialogue participant is being asked to express his opinion with respect to a proposed meeting point.
  3. request_comment_duration: The dialogue participant is being asked to express his opinion with respect to a proposed duration of a meeting.

- Linguistic Realisation:
  *Ginge das bei Ihnen?*,
  *wie sieht es bei Ihnen denn da aus*

- Full Examples - English

  DIALOG mdkr_fcaw_2:

| | | |
|---|---|---|
| fcaw_2_02: | *well I have Monday morning free* | suggest_support_date |
| | *I'm free up until three o'clock on that day* | suggest_support_date |
| | **how does that look** | request_comment_date |

| TP 13 Gespräch 19 | | |
|---|---|---|
| JON | 000 : | Oh, yes, sorry. I looked at the ⟨P⟩at the wrong page. Then ⟨P⟩⟨ähm⟩ ⟨4s⟩ ⟨P⟩then we can't do it next week ⟨P⟩but ⟨P⟩⟨äh⟩ the week afterwards, at ⟨!1 that⟩ would beeee ⟨P⟩⟨äh⟩ Wednesday and Thursday, that's May eleventh and twels ⟨!1 twelth⟩. ⟨2s⟩ **Is this fine with you?** |
| NAD | 001 : | Ein Moment, ich muß nachschaun, ein Moment bitte. ⟨10s⟩ |

- Full Example - German

| Quelle: N001K.TRL | | |
|---|---|---|
| PS1 | 003 : | Ja am Dienstag den sechsten April hätt' ich noch einen Termin frei, allerdings nur nachmittags. **Geht es da bei Ihnen ⟨!Ihnn⟩ auch?** |
| BS1 | 004 : | Oh, das is' schlecht, da habe ich um vierzehn Uhr dreißig einen ⟨!einn⟩ Termin beim Zahnarzt ⟨%⟩. |

# Request_Suggest

- Illocution: The dialogue participant is being asked to make a suggestion.

    1. request_suggest_date: The dialogue participant is being asked to propose a time for an appointment.
    2. request_suggest_location: The dialogue participant is being asked to propose a place for a meeting.
    3. request_suggest_duration: The dialogue participant is being asked to propose a duration for the meeting.

- Linguistic Realisation:
  *vielleicht sagen Sie mir dann noch, wo Sie und wann Sie können, vielleicht schlagen Sie etwas vor*

- Full Examples - English

  DIALOG mjcc_fjlv_3:

| | | |
|---|---|---|
| mjcc_3_01: | *Jackie I'd like to set up a meeting in the next couple a weeks for two hours* | init_date |
| | **do you have some time free** | request_suggest_date |

| QUELLE: TP 13 GESPRÄCH 24 | | |
|---|---|---|
| GRA | 002 : | ⟨P⟩Hallo. My name is D ⟨%⟩ter Band . And it like to arrange a dinner date with you. |
| HAM | 003 : | ⟨P⟩Uh yes. Uh ⟨:⟨;kurz ⟩ we could:⟩– I'd– ⟨P⟩**What what woul ⟨P⟩is a good day ⟨P⟩of the week for you ⟨P⟩for dinner?** |
| DBA | 004 : | ⟨P⟩Also, ich könnte ⟨P⟩Dienstag ⟨P⟩bis Donnerstag ⟨%⟨P⟩zu jeder Uhrzeit⟩. |

- Full Example - German

| QUELLE: N002K.TRL | | |
|---|---|---|
| MW1 | 002 : | Wie wär's denn am Dienstag den dreizehnten April vormittags |
| PS1 | 003 : | Tut mir leid, **am dreizehnten April bin ich noch im Urlaub. ⟨P⟩** |

# Suggest

---

- Illocution: A TON is being suggested or excluded.
- Subcategorization:

  1. suggest_exclude: A TON is being excluded.

  1.1 suggest_exclude_date: A date is being excluded.

  1.2 suggest_exclude_location: A meeting point is being excluded.

  1.3 suggest_exclude_date: A duration for a meeting is being excluded.

  2. suggest_support: A TON is being proposed / suggested.

  2.1 suggest_support_date: A date is being suggested.

  2.2 suggest_support_location: A meeting point is being suggested.

  2.3 suggest_support_duration: The duration for a meeting is being suggested.

- Linguistic Realisation:
  *Und Freitag nachmittag ist auch schlecht* (suggest_exclude_date),
  *allerdings nicht diesen Freitag.* (suggest_exclude_date)
  *ginge es am dreizehnten März?* (suggest_support_date)
  *ich könnte am ersten Februar* (suggest_support_date).

- Full Examples - English

  DIALOG flmb_mkps_6:

| | | |
|---|---|---|
| flmb_6_03 | *let me check my calendar here* | deliberate_explcite |
| | *we're on the twenty fourth* | deliberate_implicite |
| | **well the twenty seventh I have class from nine twelve** | suggest_exclude_date |
| | **so the afternoon is free and on the twenty eighth also** | suggest_support_date |
| | **the twenty ninth is totally full** | suggest_exclude_date |
| | *how do those days look for you* | request_state_duration |

| QUELLE: TP 13 GESPRÄCH 21 | | |
|---|---|---|
| GRA | 000 : | I would still have some free time in the week from thirteenth through seventeenth June. |
| HEL | 001 : | Okay, **how about we were to make it on ⟨P⟩on ⟨P⟩from Wednesday ⟨P⟩, the fifteenth until Friday, the seventeenth?** |
| WIN | 002 : | Einverstanden, der Termin paßt mir gut. ⟨äh⟩ Wie ⟨P⟩⟨ääh⟩ soll es ablaufen? ⟨ääh⟩ Wie wolln wir ⟨ääh⟩ nach Frankfurt fahren, ⟨ääh⟩ ⟨P⟩mit dem Zug oder ⟨P⟩mit dem Auto, ⟨P⟩und wann soll es hier in Hamburg losgehn? ⟨3s⟩ |

- Full Example - German

| QUELLE: N002K.TRL | | |
|---|---|---|
| MW1 | 009 : | ⟨;T⟩ geht 's bei mir sowieso fast nie . |
| MW1 | 010 : | **wie wär's wenn wir uns statt dessen⟨Z⟩ am Montag treffen würden. Montags nachmittags, irgendwann am frühen Vormittag**. |
| PS1 | 011 : | Welchen Montag meinen Sie. |

# Thank

- Illocution: The dialogue partners thank each other.
- Subcategorization
  1. thank_init: dialogue partner expresses his thanks.
  2. thank_reaction: A dialogue partner reacts to the thanks expressed by the respective other dialogue partner.
- Linguistic Realisation:
  *Danke schön,*
  *Vielen Dank.*
- Full Example - English

  DIALOG menm_ffmw_7:

| | | |
|---|---|---|
| menm_7_07: | ... | |
| | Tuesday November twenty third eight to ten AM | suggest_support_date |
| | how's that sound to you | request_state_date |
| ffmw_7_08: | *okay* | feedback |
| | *that's fine* | accept_date |
| | *I'll see you Tuesday November twenty third then* | accept_date |
| | **thanks** | thank |

- Full Example - German

| Quelle: TP 13 Gespräch 21 | |
|---|---|
| WIN 000 : | Na, ich fang' noch mal an. Guten Tag, mein Name ist Willien, **vielen Dank für Ihren Besuch.** ⟨P⟩⟨äähhh⟩ Wir wollen ja ⟨P⟩einen Termin abstimmen, damit wir gemeinsam nach Frankfurt zu Ihrem Unternehmen fahren können um dort ⟨P⟩⟨äähh⟩ mir das Softwareprogramm vorzustellen. ⟨P⟩⟨äh⟩ Vielleicht ⟨äh⟩ sollten wir unsre Terminkalender vornehmen und einen passenden Termin abstimmen. |

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