Developing a Typology of Dialogue Acts: Some Boundary Problems

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Abstract

The paper gives an overview of a typology of dialogue acts used for annotating Estonian spoken dialogues. Several problems of the classification and determining of dialogue acts are considered. Our further aim is to develop a dialogue system which can interact with the user in natural language following the norms and rules of human-human communication.

1   Introduction

The paper describes a typology of dialogue acts we use for annotating of Estonian dialogues. The problems of classifying and determining dialogue acts are considered. Our aim is to develop a typology of dialogue acts which is general, not domain- or problem-oriented and can be used for annotating both spoken human-human and human-machine dialogues. Our main goal is to model natural dialogue on the computer. Underlying our solutions is the presupposition that the computer is one of the dialogue participants. Still, the computer has some restrictions in its work, and human-computer dialogues are simpler than human-human ones. Nevertheless, natural dialogue corpora can be used for dialogue systems development, a distilling method can be implemented to simplify the real dialogues (Jönsson, Dahlbäck 2000).

2   Principles of Classification

There are several requirements for developing a dialogue act system for dialogue analysis. First, the acts that people use in actual conversations must be found. Secondly, the act system must make it possible to differentiate functions. Thirdly, the typology must make it possible to differentiate utterances with the same linguistic realisation but with different functions.

There are several well-known typologies of dialogue acts (Sinclair, Coulthard 1975, Francis, Hunston 1992, Stenström 1994, Bunt 1999, Stolcke et al 2000, Dybkjær 2000, Allwood et al 2001, Mengel et al 2001). We have decided to develop our own dialogue act system because no typology seemed to fully correspond to our needs.

The principles underlying our typology are the same as for other coding schemes (Edwards 1995). Three types of principles are used: 1) category design, 2) readability, 3) computer manipulation.

The first type is important for our current study. There are three features in designing this group: categories must be systematically discriminable, exhaustive, and systematically contrastive.

The first means that for each event in the data and each category it must be clear whether or not the category applies.

Exhaustibility means that for each particular case in the data there must be a fitting category (even if only 'miscellaneous'). For that reason, every type in our typology contains a subtype 'other' which is used for annotating the things we are not interested in at the moment, or are not able to determine exactly.

Contrastivity needs some more discussion. When categories are treated as exclusive alternatives, the categories partially determine each other's boundaries. When categories are not mutually exclusive, as with speech act (or dialogue act) categories, there is an implicit contrast between the presence and the absence of each individual conceptual property. The researcher's task in choosing a set of descriptive categories for coding is to exploit the contrastiveness of categories, that is, to choose categories which contrast in ways which are most likely to reveal the properties of interest in the research (Edwards 1995: 21-22).

Why are we developing a new typology? In our opinion, the categories used by most of the typologies are too general. For example, the communication management or acknowledgement can not form only one category, i.e. a unit with one function. Conversation studies have found out a more detailed classification of utterance functions. A typology must to take in account such classification.

Our typology departs from the point of view of conversation analysis (CA) that focuses on the techniques used by people themselves when they are actually engaged in social interaction. This it is an empirical, inductive analysis of conversation data (see e.g. Hutchby, Fooffitt 1998).

An advantage of this approach is the fact that CA departs from empirical data, i.e. it tries to find out markers in the text that allow the determination of utterance functions. In our opinion, it is especially important for human-computer interaction. On the other side, CA implements only microanalysis, it does not use a previously ready-made typology of dialogue acts but tries to analyse every dialogue act as it would be unique.

Still, the most part of our typology coincidences with the existing typologies. Interpretation of communication management and of relations between turns is different, and these differences form a methodological basis for the new taxonomy.

The departing point of the CA is that a partner always must react to previous turn regardless of his/her own plans and strategies. Therefore the analysis of relations between two turns is central. This is the reason why we do not start our typology with determination of forward-looking and backward-looking acts but differentiate adjacency pair relations from non-adjacency pair relations.

Some classes of dialogue acts conventionally form adjacency pairs (AP) where producing the first act makes the second act relevant. There are differences between the first and second part. A conceded first part requires certain second part (e.g. a question requires an answer). The second part of an AP has certain relevant position in dialogue (e.g. the answer to a question must come after the end of the question, not earlier, not later). In real conversations there are a lot of violations of this norm. For example, one can answer a question immediately after a questioning word of the partner or there may be insertion sequences between the parts. In some cases, the second part remains missing. Still, the second part remains relevant even if it is not produced in the next turn.

It means that norms followed by participants form the basis of conversation. Still, participants may violate norms. In this case they give a signal to the partner. We suppose that the computer as a dialogue participant must follow the norms and recognise signals of violations of the norms by the partner. The computer must be able to differentiate the first part of an AP (which is expecting a reaction) from acts that do not need a reaction, e.g. questions from narrative or real questions from rhetorical questions that do not expect any reaction. Thus, the first basis of the act typology is: the acts forming APs must be differentiated from the acts that do not form APs.

Such a system allows to relate antecedents and responses and analyse such types of turns /utterances that are located between a question and an answer (insertions sequences).

Secondly, acts used in dialogue are typically divided into two groups: information acts and dialogue managing acts. In our opinion, communication management is not one function but there are different functions. The most important is repair that means solving all the communication or linguistic problems (cf. Schegloff, Jefferson, Sacks

1977, for Estonian Hennoste 2000-2001:2689-2710, 179-183, Strandson 2001). Human-human communication can not be fluent in principle. In human-computer interaction, the computer must be able to differentiate a problem solving act from an information act or fluent interaction. It is essential because some information acts and repair acts have similar form (e.g. almost all initiations of repairs are questions). This gives us the following difference from the existing typologies: the dialogue managing acts must be divided into 1) fluent conversation managing acts and 2) acts for solving communication problems or repair acts.

Based on the category design principles and the two principles of dialogical communication, we differentiate 8 groups of dialogue acts in our typology: 1) Rituals (greeting, thanking etc), 2) Restructuring acts (used to change a topic or a type of activity, e.g. from small talk to meeting), 3) Contact control, 4) Repair, 5) Questions and answers, 6) Directives (request, etc), 7) Opinions (assertion, argument etc), 8) Other acts (that do not form APs). The overall number of dialogue acts is 137. An overview of the typology is given in appendix 1.

Let us concentrate now on acts of groups 5 and 6, i.e. question and directive APs.

3   Corpus

The corpus of spoken Estonian forms the basis of our study. It consists of various types of oral speech, usage of both everyday and institutional conversation, spontaneous and planned speech, monologues and dialogues, face-to-face interaction and media texts (Hennoste et al 2001). The corpus is transcribed by the transcription of CA.

For this paper we have analysed calls to information (asking phone numbers, addresses etc), and calls and face-to-face conversations in travel bureaus.[1] Those two activity types are quite similar. Both are institutional dialogues where the caller/customer asks for information and the consultant tries to provide the wanted information. Participants are strangers. Face-to-face interaction

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[1] The activity type typology in our corpus is characterised by the following general parameters (see Hennoste et al 2001): 1. Face-to-face, telephone, media. 2. Primary goal: involved/task oriented-information. 3. Everyday/ institutional communication. 4. Monologue/dialogue 5. Spontaneous/pre-planned text. 6. Participants are familiars/strangers.

takes place in the institutional territory (travel bureau). The text of the participants is partly pre-planned (the client has thought beforehand what to ask and the consultant has given the same information several times). At the same time there are some differences, too. The travel bureau dialogues are consultations where a lot of questions are asked. The calls to information typically contain only one fixed question.

The sub-corpus we have used for the analysis consists of 114 texts, each of which is annotated by two different annotators and then unified. Our sub-corpus has 5815 dialogue act tags, among them 308 first parts and 258 second parts of directives, 633 questions and 1081 answers.

4   Questions and Directives

Some typologies we have studied make a difference between questions and directives, some do not (e.g. Bunt 1999). Sometimes questions and directives are differentiated on the basis whether the user needs some information (then it is question) or he/she wants to influence the hearer's future non-communicative actions (then it is directive). Our departing point is that it is not important for dialogue continuation whether the hearer must to do something outside of current dialogue or not. He/she must react to both a question and a directive because both are the first parts of APs. The second part of AP can be verbal (as in our dialogues) or non-verbal (some action). It can come immediately after the first part of AP or later. Additionally, the response can influence the course of dialogue (e.g. determine the structure of the partner's next turn). The main difference between directives and questions is formal – questions have special explicit form in Estonian (interrogatives, intonation, specific word order) but directives do not have it. Imperative directive expressions occur seldom in our dialogues.

On the other hand, there are interrogative utterances that are used not to ask an information question but to initiate repair, to form a rhetoric question, contact control, conventional questions (*how are you?*). Those utterances are excluded from question-answer APs in our typology.

4.1   Types of Questions and Answers

There are three types of questions depending on the expected reaction:

- questions expecting giving information: open (wh-)question, open (declarative) yes/no question
- questions expecting agreement/refusal: closed yes/no question, question that offers answer
- questions expecting the choice of an alternative: alternative question.

Additionally, we have the question type Other.

We differentiate two sub-groups in the first and third group because from one side they have formal specific features and from the other side there are particular problems with boundary determination (see also Hennoste 2003). Open yes/no question and closed yes/no question have similar form but they expect different reactions from the answerer (e.g. *Are you open in winter?* expects the answer *yes* or *no*, but by asking *Is there a bus that arrives in Tallinn after 8?* the questioner wants to know the departure times of buses).

The computer must be able to differentiate the two types of questions. There are no formal differences thus other criteria must be found.

The first observation is that these questions occur in different parts of a dialogue. Most of open yes/no questions are the second parts of series of questions that express the main line, the same topic.

Most of the closed yes/no questions have the function of specifying questions in our dialogues, and there are some that initiate repair (Hennoste 2003).

Secondly, how does the computer understand that something is wrong? For this purpose text characteristics can be found in human-human dialogues where the interpretations of participants are different. There are no examples in our corpus where the answerer interprets a closed question as an open one. Still, there are some examples where an open question is interpreted as a closed one and only *yes* or *no* answer is used instead of giving more information. There are two possibilities to solve the problem in the dialogues of our corpus.

The first possibility is that the client asks a specifying question immediately (example 1, the participants are: H – client, V – consultant). [2]

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[2] To simplify the picture, only those acts are marked in examples, which are connected with question-answer pairs and are relevant for the analysis of the example. Dialogue act names are written in capitals. Transcription marks cf. appendix 2.

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(1) H: ahah .hh kas teil on ming-
isugune (.) ´veebiaadress ka ole-
mas kus saab (.) [infot.]
OPEN YES/NO QUESTION
do you have any www-address too where to get information
V: [jaa?] AGREEING YES (.) {-}
      yes
H: ´mis see ´oleks.   SPECIFYING
QUESTION
      what is it
V: ütlen   kohe?(0.5)   ´kolm
dabl´juud,   OPEN ANSWER: GIVING
INFORMATION
      I will say at once three dabljuus /.../

The second possibility is that the yes/no answer is followed by a long pause, and only then the information is given by the answerer (example 2). The necessary length of pause needs additional study. On the other side, these types of questions are used in different positions in Estonian dialogues.

(2) H: {ahah} (0.5) ja on seal ka
mingisuguseid ´sporditegemise või-
malusi.   OPEN YES/NO QUESTION
      and are there any possibilities to do sport
V: ikka on.   AGREEING YES
      yes there are
      (1.0)
      ´palli {mängida saab ja
´piljardit siis=ja ´keeglit=ja}
või vabandust=e (.) ee seda
´sulgpalli=ja OPEN ANSWER: GIVING
INFORMATION
      one could play ball and billiards and bowling and or sorry that badminton=and

The second type of questions (expecting agreement/refusal) can be divided into two sub-types: closed yes-no question, and question that offers answer (e.g. *see ´seitseteist kolmkümend on kõige ´ilisem või* /is the seventeen thirty the latest/). The questioner has some opinion, hypothesis and he/she is expecting confirmation by the partner. These sub-types can be differentiated on basis of different linguistic realisations in Estonian.

There are 237 wh-questions, 123 closed yes-no questions, 73 open yes-no questions, 153 questions

that offer answer, 45 alternative questions in our analysed corpus.

Certain questions are closely connected with certain answers:
- wh-questions and open yes/no-questions → open answers: giving information / missing information;
- closed yes/no-questions and questions that offer answer → closed answers: yes / no / agreeing no / other yes/no-answer;
- alternative questions → alternative answers: one / both / third choice / negative / other alternative answer.

In addition, there are some answers that could be used with different questions: postponing the answer (*one minute please, I will look at once*), answering with the question (Q: *what do you think?* A: *and what do you think?*), refusing to answer (Q: *do you have some tours to South-Estonia?* A: *we don't organise the tours at all*), the answer that gives alternatives (the answer to the wh-question or yes/no question where more than one alternative is given that makes the customer decide himself or to ask specifying questions), the unsure answer (*I am not sure, ...I think so, but...*).

4.2 Types of Directives and Reactions to them

The first parts of directive APs are request, proposal and offer. A request expresses the author's need or intent to get something (information or an action by partner). The utterances that have the form of requests can sometimes manage conversation. Such acts belong to the corresponding groups in our typology and are not considered here.

In example 3 H informs V that he wishes to speak with a certain person. In example 4 H express a wish to finish the partner's (V) action.

(3) V: tere paluksin ´Merlet.
REQUEST
    good morning may I speak to Merle
H: jaa ma=kuulen.
FULFILLING DIRECTIVE: OTHER
        yes I'm speaking

(4) V: ´Raadi kauplus, (1.5) neli-
sada, kolm kolm kolm. (...)
´Ristiku kauplus, (1.0) neli
seitse üks, (.) kolm viis kolm.
(1.0)

Raadi shop four hundred three three three Ristiku shop four seven one three five three
H: no aitab.   REQUEST (.)
    it's enough
V: jaa=palun?
FULFILLING DIRECTIVE: OTHER
    yes you're welcome
H: aitäh.
    thank you

Proposals and offers differ from requests because they expect a different second part. Requests are similar to open questions in the sense that they expect giving information and not a yes/no answer or the choice of an alternative. The suitable reactions to requests are fulfilling directive: giving information or fulfilling directive: missing information. Proposals and offers are similar to closed yes/no questions. In this case the suitable reactions are agreement or refusal (agreement with directive and refusal of directive in our typology).

Offers must be differentiated from proposals. In the first case, the action will originate from the author (offer: *I'll send you the programme*), in the second case from the partner (proposal: *please come tomorrow, call me later*), cf. example 5.

(5) H: ää kas te oskate öelda kui
palju se ´pilet maksab.
could you tell me how much the ticket will cost
V: kahjuks ´piletite=inda meil
ei=ole. te peate sealt küsima=
PROPOSAL
unfortunately we do not have ticket prices you must ask there
ma=võin ´numbri anda kui ´soovite.
OFFER
I can give you the number if you want
H: mt ee võite anda ´küll jah?
AGREEMENT WITH DIRECTIVE
    mm you can give yes
V: see on kaks ´kolm, (0.5)
    it is two three

The first parts of directives have analogues in the group of questions:
    request – open yes-no question / wh-question
    proposal / offer – closed yes-no question.
There are 142 requests, 62 offers and 38 proposals in our analysed corpus.

Offer must be differentiated from promise. In the last case, the author commits to do an action as in the case of offer, but promise does not presuppose the agreement of the partner and therefore it is non-AP act.

Different acts behave differently in information dialogues.

First, some of directives need immediate fulfilling (e.g. in the next turn) and some of them need it in future. In our dialogues, proposals expect typically a future action (outside of current conversation). Offers typically need immediate fulfilling. Requests always need immediate fulfilling and they are connected with the current dialogue.

Secondly, the analysis of directives shows that the authors of different types of acts are different. Typically, request is used by the client. The consultant uses questions in similar situations.

Proposals and offers are used mainly by consultant, client has used them only in two cases in our data.

Reactions to directives are similar to answers to questions. Still, we annotate them differently as they belong to different APs. There are certain pairs of the first and second parts of directive APs:

- request → fulfilling directive: giving information / missing information
- proposal / offer → agreement with directive / refusal of directive.

In addition to that, there are some reactions that could be used with different directives and are similar to answers to questions: postponing the reaction (*one minute please, I will look at once*), refusing to answer (*we have no such information*), unsure reaction (*I am not sure, ...I think so, but...*).

5 Communication Problems

If a questioner asks such questions and/or expresses such requests that the answerer is able to react adequately and give the answer immediately, then the conversation is fluent. In fact, such conversations occur seldom. Typically, there are problems in a conversation which need to be solved.

5.1 Repair and Adjusting

In some situations one of partners finds some communication problem. He/she signals it and both partners agree that the problem must be solved. Repair is used for solving such problems.

The computer must understand the repair initiation by the partner and be capable of performing the repair. On the other side, the computer must be able to initiate repairs itself if there are problems in the preceding text.

It is important to bring out repair because most of repairs are formally question-answer APs. (We do not consider the boundaries of information request and repair here.)

There are several types of repairs. We are not interested in self-repairs but in the hearer-initiated and speaker-performed repairs. Such repairs can be classified in different ways (see Hennoste 2000-2001, Strandson 2001).

Our typology of repairs is similar to question-answer APs because most of the initiations of repairs are questions in Estonian. We differentiate three types of repair initiations. The first type is the clarification where the hearer repeats the previous information to check whether he/she understood it right or not. Formally, there are questions that offer answer.

The second type is the re-formulation where the hearer offers his/her interpretation of previous information. It may have several forms.

Questions that are used for repair initiation differ from information questions by their content and linguistic form. Certain linguistic means are used in repair questions (cf. Strandson 2001 for Estonian).

Both of the repair initiations need either confirmation or rejection by the partner who has caused the problem. Thus the pairs of acts are similar to the question-answer pairs.

The third type is non-understanding. It can be divided into several sub-types. The partner could not hear the previous turn, he/she finds the information surprising and decides to check it, or he/she did not understand the utterance. There are two linguistic subtypes of this act. The first is open initiation (formed by some very general words: *ah, what*) that do not determine the location of the problem. The typical response is repeating of information. The second subtype is specifying initiation, formed by a wh-question. The typical response is adjusting, extending or clarification.

We are currently interested in the last sub-group that differs from information questions by content and not by linguistic form. It appears very frequently in information dialogues.

Clients often ask too general questions and the consultant is not able to answer without adjusting the questions. Traditionally, such situations were not considered as repairs. The reason may be that such repair is very seldom in everyday dialogues that usually form the basis of the typology of repairs. To the contrary, repairs of this type are frequent in information dialogues. Thus we introduced a special act for such repair which we call adjusting the conditions of answer (example 6).

(6) H: tahaks odavalt ´Inglismaale sõita. (0.5) REQUEST
    I want to travel to England cheaply
V: jaa?   (0.5) CONTINUER
      yes
H: järgmisel nädalal.
ADDITIONAL INFORMATION: ADJUSTING
    the next week
V: reisite üksi või ´kahekesi.
ADJUSTING THE CONDITIONS OF ANSWER
    do you travel alone or two together
H: kahe´kesi.   (0.5) ANSWER AS ALTERNATIVE: ONE
    two together
V: sis saab seda Es´tonian Airi ´kaks ühe hinnaga ´pakkumist kasutada.   FULFILLING DIRECTIVE: GIVING INFORMATION
    then you can use the Estonian Air offer: two with one price

It is defined as follows: this act must react to a request or a question. The purpose of the act is to get additional information in order to provide the answer. Consultants typically use this act.

5.2   Refusal and Missing Information

The second problem group are situations where the answerer is not able to give information. Three cases can be differentiated depending on continuation of dialogue: the answerer does not have the needed information, he/she refuses to give it, or he/she cannot give it immediately.

If the answerer does not have the information then the questioner must abandon the following attempts.

In the case of having information we have two possibilities depending on whether the answerer is

the consultant or client. The first possibility can be excluded because the consultant (computer) as an institutional provider of information may not refuse to give information. The second case is possible, the client may refuse and moreover, he is not obliged to explain such behaviour. From the point of view of continuation of conversation we have similar solution here as in the case of missing information. Therefore we annotate both acts as refusing to answer.

If the answerer cannot give information immediately then the conversation can continue in two different ways. First, the question or request was too general, and after the questioner has adjusted it the answerer will be able to give the needed information or point to its absence. There are four adjusting possibilities in Estonian dialogues.

The most frequently used possibility is that the answerer asks the questioner to adjust the previous question. In this case he/she reacts to a general request by using particles (*jaa, jah* /yes/ etc.). Such reaction is marked as a continuer (example 6).

The second possibility is that the answerer asks adjustable questions himself/herself. Such act is called adjusting the conditions of the answer (example 6).

The third possibility is to avoid the reaction. A too general request or question is followed by a pause.

The fourth possibility is that the answerer refuses to answer but he/she proposes another way to the partner to get the needed information (per e-mail, fax, to go to the office, etc.).

In human-computer interaction it can be supposed that the computer tries to answer all the general questions and uses adjusting acts for this purpose.

Another case is if the answerer does not have conditions to give information. In example 7, the client wants to know the price of the car repair. Obviously, the consultant has a previous understanding of the price, therefore we cannot annotate his turn as missing information. But he is not able to say the exact price without seeing the car and therefore he cannot give the answer during the current conversation.

(7) H: ´mis see umbes ´maksma võiks minna. (0.8) ja kui ´kiiresti. (0.5) OPEN QUESTION
    how much does it cost approximately

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V:    no        ´tähendab=ä,      (.)
kõigepealt ´mina vaatan ´autot,
[vaatan] ´asju, mis ma pean ´alla
panema,
```
   it means I shall see the car see the things that I must use
```
H:
          [jah]   CONTINUER
   yes
V:    sis   ma   ütlen   ´hinna.
REFUSING TO ANSWER
```
   then I'll tell the price
```
sellepäarst=et=et=et kui=ma kui=ma
panen ´alla need ´asjad, mis ´teie
mulle ´pakute: see asi pärast ei
´tööta,   ADDITIONAL INFORMATION:
ARGUMENTATION
```
   because if if I'll use the things you are offering this thing will not work later
```
H:    a:hah    (3.2) CONTINUER
V:    ma ei ´saa ee ´välja pakkuda
´hinda ´selle põhjal, mida ma ei
´näe.   ADDITIONAL INFORMATION:
ARGUMENTATION
```
   I can not offer the price if I do not see

Similarly to the first parts, (most of) the second parts of directives have analogues in the group of answers to questions, cf. table 1.

Table 1. Correspondence between some second parts of APs.

Alternative answer: one Alternative answer: both Alternative answer: third Alternative answer: other Alternative answer: negative Open answer: giving information	Fulfilling directive: giving information
Open answer: missing information	Fulfilling directive: missing information
Refusing of answer	Refusing of directive
Postponing the answer	Postponing the answer of directive
Unsure answer Answer as an alternative	Restricted fulfilling of directive

Agreeing yes Agreeing no	Agreement with directive
Non-agreeing no	Non-agreement with directive

6   Conclusion

Our further work will concentrate on the definitions of dialogue acts. The frame formalism can be used. Some examples of the definitions can be found in (Koit, Oim 2000). In this process we will make additions to our annotation guide. The kappa value of the annotation must be increased, currently it is between 0.59 (for face-to-face dialogues in travel bureau) and 0.79 (for calls to information). Our further aim is to develop a programme which will implement statistical learning methods for recognising dialogue acts.

7   Acknowledgement

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Appendix 1. Dialogue Acts

Only the acts are listed that are essential for the current paper.

I. Adjacency pair acts
1. Rituals
/--/
2. Restructuring acts
/--/
3. Contact control
   CONTINUER
/--/
4. Repair
4.1. Initiating repair
   RE-FORMULATION
   RE-QUESTION
   NON-UNDERSTANDING
   OTHER
4.2. PERFORMING REPAIR
4.3. EVALUATING REPAIR
4.4. OTHER
5. Questions

5.1. First parts
By form
   CLOSED YES-NO QUESTION
   OPEN YES-NO QUESTION
   ALTERNATIVE QUESTION
   OPEN QUESTION
   QUESTION THAT OFFERS ANSWER
By content
   ADJUSTING QUESTION
   ADJUSTING THE CONDITIONS OF ANSWER
   OTHER
5.2. Second parts
   AGREEING YES
   NON-AGREEING NO
   AGREEING NO
   OTHER ANSWER TO YES-NO QUESTION
   ANSWER AS ALTERNATIVE: ONE
   ANSWER AS ALTERNATIVE: BOTH

ANSWER AS ALTERNATIVE: THIRD
ANSWER AS ALTERNATIVE: NEGATIVE
ANSWER AS ALTERNATIVE: OTHER
OPEN ANSWER: GIVING INFORMATION
OPEN ANSWER: MISSING INFORMATION
POSTPOSING THE ANSWER
REFUSING OF ANSWER
ANSWER AS AN ALTERNATIVE
UNSURE ANSWER
OTHER

6. Directives
6.1. First parts
REQUEST
PROPOSAL
OFFER
OTHER

6.2. Second parts
FULFILLING DIRECTIVE: GIVING INFORMATION
FULFILLING DIRECTIVE: MISSING INFORMATION
FULFILLING DIRECTIVE: ACTION
AGREEMENT WITH DIRECTIVE
REFUSAL OF DIRECTIVE
POSTPONING THE ANSWER OF DIRECTIVE
RESTRICTED FULFILLING OF DIRECTIVE
RESTRICTED AGREEMENT WITH DIRECTIVE
OTHER

7. Opinions
/--/

II. Non-AP acts
ADDITIONAL INFORMATION: ARGUMEN-TATION
ADDITIONAL INFORMATION: SPECIFYING PROMISE
/--/

Appendix 2. Transcription marks

falling intonation	point
fall not to low	comma
raising intonation	?
short interval (max 0.2 sec)	(.)
timed interval	(2.0)
begin of overlap	[
end of overlap	]
latching at end of utterance	word=
latching at beginning	=word
drawling	::
stress ` at the beginning of the stressed syllable	
glottal cut off	do-
in-breath	.hhh
item in doubt	{text}
unreachable text	{---}