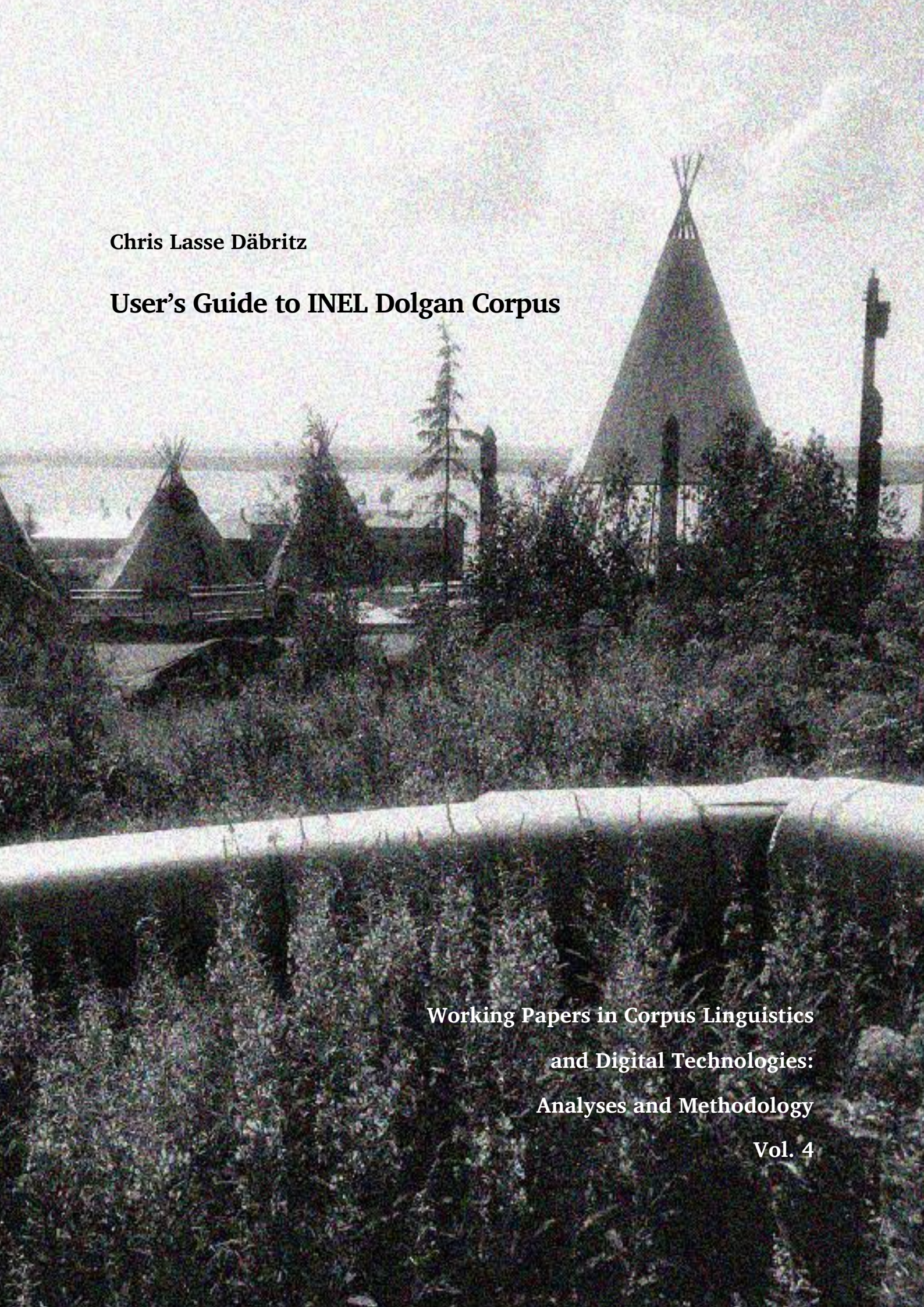
Chris Lasse Däbritz

User's Guide to INEL Dolgan Corpus



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Analyses and Methodology
Vol. 4

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1. Introduction

1.1. Objective of the corpus

The present corpus of Dolgan has been created as part of the long-term research project INEL ("*Grammatical Descriptions, Corpora and Language Technology for Indigenous Northern Eurasian Languages*") in the context of the Academies' Programme[1], coordinated by the Union of the German Academies of Sciences and Humanities[2]. Its primary goal is to create digital and machine-searchable corpora of several indigenous Northern Eurasian Languages (see also Arkhipov & Däbritz 2018).

The INEL Dolgan corpus at hand fills a gap in the documentation of the indigenous languages of Northern Eurasia and makes possible further descriptions of the language. Dolgan is not completely unknown and undescribed, however, well-based grammatical descriptions are missing, whence the corpus can be a valuable tool for both language-specific and typologically oriented research.

1.2. Dolgan language

1.2.1. Description

Dolgan is a Turkic language that is spoken by 1,054 people (VPN 2010) primarily in the Taymyr Dolgan-Nenets District (i.e. mostly on the Taymyr Peninsula), which belongs administratively to the Krasnoyarsk region of the Russian Federation. A small group of speakers of Dolgan is also found in the Anabar District of the Sakha Republic (Yakutia). Together with its closest relative, Sakha (Yakut), it forms the North Siberian subbranch of the Siberian branch of the Turkic languages (Johanson 1998: 83). For a long time, it was considered a dialect of Sakha; only in 1985 it was stated the first time that Dolgan is a separate language, which developed from Sakha under heavy influence of Evenki, a Tungusic language (Ubryatova 1985: 3). Due to the predominance of Russian in all official spheres of life, Dolgan is to be regarded as a highly endangered language.

1.2.2. Language codes

ISO 639-3 code: **dlg**

Glottolog code: **dolg1241**

1.2.3. Dialectal subdivisions

Two dialects of Dolgan are often named: Upper, or South-(West)ern Dolgan vs. Lower, or North-(East)ern Dolgan (e.g. Artemyev 2013: 9f.). The differences between the dialects, however, are marginal and mostly in phonetics and in the lexicon. The border between the dialects runs through the settlement of Khatanga (Stachowski 1998: 126) – settlements to the west (Ust'-Avam, Volochanka, Katyryk, Kheta, Novaya, Kresty), thus, belong to the Upper Dolgan dialect and settlements to the east (Zhdanikha, Novorybnoe, Syndassko, Popigaj), thus, belong to the Lower Dolgan dialect. Quite a big group of Dolgans live also in Dudinka, the administrative centre of the Taymyr Dolgan-Nenets District; this group consists of speakers from the whole area. As stated above, there is also a small group of speakers found

[1] http://www.akademienunion.de/en/research/the-academies-programme/, last access: 02.04.2020.

[2] http://www.akademienunion.de/en/, last access: 02.04.2020.

in the Anabar District of the Sakha Republic, their dialect is transitory to Sakha and it is often not clear whether a person speaks Dolgan or Sakha. The texts in the corpus stem only from the "core" area of Dolgan, so Anabar Dolgan is not included here.

1.3. Archiving

The corpus comprises source media files (whenever available) along with the annotated transcripts in *EXMARaLDA*[3] transcript formats and metadata descriptions in *EXMARaLDA* Coma format (see section 2.6.6 for details).

The data curation, archiving and publication are performed by the Hamburg Centre for Language Corpora (HZSK)[4]. The corpus is freely available under open-access conditions with Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International license (CC BY-NC-SA 4.0).[5]

1.4. Citation

The corpus is to be cited as follows:

> Däbritz, Chris Lasse; Kudryakova, Nina; Stapert, Eugénie. 2019. INEL Dolgan Corpus. Version 1.0. Publication date 2019-08-31. Archived in Hamburger Zentrum für Sprachkorpora. http://hdl.handle.net/11022/0000-0007-CAE7-1. In: Wagner-Nagy, Beáta; Arkhipov, Alexandre; Ferger, Anne; Jettka, Daniel; Lehmberg, Timm (eds.). The INEL corpora of indigenous Northern Eurasian languages.

1.5. Project members

1.5.1. Project summary information

The INEL Dolgan corpus has been developed within the long-term INEL project (*"Grammatical Descriptions, Corpora and Language Technology for Indigenous Northern Eurasian Languages"*), 2016–2033. For an overview of the INEL project, see Arkhipov & Däbritz (2018).

The research was carried out at the Institute for Finno-Ugric/Uralic Studies (IFUU) of the Universität Hamburg (UHH). The technical infrastructure was provided by the Hamburg Centre for Language Corpora (HZSK). The project homepage can be visited at: https://inel.corpora.uni-hamburg.de/.

1.5.2. Project leader

Prof. Dr. Beáta Wagner-Nagy (IFUU, Universität Hamburg)

1.5.3. Researchers

Dr. Alexandre Arkhipov (Research coordinator; IFUU, Universität Hamburg)
Chris Lasse Däbritz, M.A. (IFUU, Universität Hamburg)
Dr. Eugénie Stapert (Visiting scholar June 2017 – August 2017 and June 2019 – July 2019; Universiteit Leiden)

[3] http://exmaralda.org/en/, last access: 02.04.2020.
[4] https://corpora.uni-hamburg.de/hzsk/en, last access: 02.04.2020.
[5] https://creativecommons.org/licenses/by-nc-sa/4.0/, last access: 02.04.2020.

1.5.4. Developers

Timm Lehmberg, M.A. (Technical coordinator, IFUU, Universität Hamburg)
Daniel Jettka, M.A. (IFUU, Universität Hamburg)
Niko Partanen, M.A. (September 2016 – March 2017)
Anne Ferger, M.A. (IFUU, Universität Hamburg)

1.5.5. Student assistants

Olesya Degtyareva (October 2016 – December 2017)
Hannes Klitzing (September – December 2016)
Ozan Özdemir (August 2018 – August 2019)

1.6. Acknowledgements

1.6.1. Funding

This corpus has been produced in the context of the joint research funding of the German Federal Government and Federal States in the Academies' Programme, with funding from the Federal Ministry of Education and Research and the Free and Hanseatic City of Hamburg. The Academies' Programme is coordinated by the Union of the German Academies of Sciences and Humanities.[6]

1.6.2. Organizational support

The following institutions and persons provided organizational support for the project, including a fieldwork trip to Dudinka in July/August 2017:

Lyubov' Yur'evna Popova, TDNT Director
Tat'yana Viktorovna Ruban, TDNT Vice-Director
Nina Semyonovna Kudryakova, TDNT Head of Department of folklore and ethnography
Institute of the World Culture (IWC) at M.V. Lomonosov Moscow State University, and personally:
Acad. Vyacheslav Vsevolodovich Ivanov (1929–2017), IWC Director

The TDNT materials were transcribed and translated by native speakers of Dolgan:

Nina Semyonovna Kudryakova, who also worked as editor for transcriptions and translations by other consultants
Svetlana Semyonovna Kudryakova
Egor Kudryakov
Adeya Evdokimovna Eske
Aleksandra Tuprina
Illarion Tuprin

During the fieldwork trip in 2017 the following language consultants helped to transcribe, translate and analyze all kind of texts from the corpus:

Nina Semyonovna Kudryakova
Anna Alekseevna Barbolina
Vera Polikarpovna Bettu
Galina Sidorovna Chuprina

[6] The project was applied for by Prof. Dr. Beáta Wagner-Nagy, Dr. Michael Rießler, Hanna Hedeland, M.A., and Timm Lehmberg, M.A.

Adeya Evdokimovna Eske
Yuliya Kupchik
Stepanida Il'inichna Kudryakova
Polina Prokop'evna Uodaj

1.6.3. Data sources

The material included into the INEL Dolgan Corpus comes from four different sources:

- The first package of texts included into the corpus is from the published volume Fol'klor Dolgan [FD 2000] (Efremov et al. 2000).
- Second, a large part of the texts in the corpus was made available by the Taymyr House of National Arts (TDNT)[7].
- Third, Eugénie Stapert allowed the project to include her fieldwork materials into the corpus.
- Finally, some audio material was collected on a fieldwork trip to Dudinka in 2017.

The content and characteristics of the texts from the different sources are described in section 2.4.

2. The corpus

2.1. The language(s) of the corpus

2.1.1. Content

The language of content is mostly Dolgan speech, in instances of code-switching also some Russian speech and – in folklore texts – few instances of Evenki speech.

2.1.2. Annotations

The main language of annotations is English.
Translations of the original text are provided in English, German and mostly Russian (see tiers **fe**, **fg**, **fr**). For texts from the written source [FD 2000], original translations into Russian are given (see tier **ltr**) as provided in the publication; the main translations in tier **fr** are often identical but sometimes have been edited. For texts transcribed from the audio tapes, literal translation provided by the native speakers during transcription is given in the same tier (**ltr**).

Morpheme glosses in English, German and Russian are provided for lexical items; labels for grammatical morphemes are identical in the respective tiers and are based on abbreviations of English terms, largely following Leipzig Glossing Rules (see tiers **ge, gg, gr**).

2.1.3. Metadata

The language of metadata is English; Russian spellings of the personal names and place names are also provided in communications and speaker metadata.

2.2. Media

The corpus contains both written and audio data. The material of the corpus stems from four different sources: 1) previously published texts [FD 2000] with no audio material available, 2) audio files, made available by the House of Cultures of the Peoples of the Taymyr peninsula (TDNT) and transcribed by

[7] http://www.tdnt.org/, last access: 02.04.2020.

local consultants, 3) audio files and transcriptions from various fieldwork sessions of Eugénie Stapert (Leiden) collected in 2008, 2009 and 2010, 4) audio files from an experiment on social cognition done in 2017 by Eugénie Stapert and Chris Lasse Däbritz.

2.3. Selection

The selection of the material to be transcribed depended mostly on its availability. In the beginning of the project, only the texts from [FD 2000] were available, so they were the starting point. Later on, transcripts from the TDNT and from Eugénie Stapert's collection were added.

2.4. Content

The corpus contains texts/transcripts of various genres, which are broadly classified as folklore, narrative, conversation and song; while not being a separate genre, translations are classified apart from the other genres, for their language differs in some respects from the original Dolgan texts.

The 35 transcripts that come from [FD 2000] are all folklore texts, mostly tales about animals and legends. They were collected in the 1930s and 1960-1970s mostly in the western part of the Taymyr peninsula, both in the tundra and in settlements like Volochanka and Ust'-Avam. Unfortunately, no corresponding sound material can be provided.

The 52 transcripts that come from the TDNT material represent all kind of genres, i.e. conversations, folklore texts, narratives as well as four translations. Most of the material was broadcasted in the local Dolgan radio in Dudinka in the 1960-1990s. Though being recorded mostly in Dudinka itself, the transcripts represent the speech of Dolgans coming from all over the Dolgan territory, including the most remote settlements Popigaj and Syndassko. As these transcripts are made from original radio material, all of them are linked to the respective sound file.

The 25 transcripts that were collected and kindly made available by Eugénie Stapert mostly represent everyday narratives, but also include two songs. During her fieldwork trips in 2007, 2008 and 2010, she collected this material in the settlements of Volochanka, Kheta and Syndassko, thus, in all parts of the Dolgan territory. Also these transcripts have all corresponding sound.

Finally, 4 transcripts come from a recording made on a fieldwork trip to Dudinka in 2017. The object of recording was an experiment on Social Cognition[8], lasting around half an hour.

2.5. Corpus size

The corpus contains 116 transcripts (16 conversations, 50 folklore texts, 44 narratives, 2 songs, 4 translations) of 61 speakers with 11,329 utterances and 77,636 tokens. 81 transcripts can be linked with the respective audio file, which make up a total 10:42:14 hours of audio material.

2.6. Naming conventions

2.6.1. Name of the corpus

The name of the corpus is INEL Dolgan Corpus.

[8] https://scopicproject.wordpress.com/run-the-task/, last access: 02.04.2020.

2.6.2. Orthography conventions in the corpus

Most of the transcripts have a tier **st** (source transcription). This tier represents the text in Cyrillic writing system. In case of the texts from [FD 2000], this is the original text from the source. In case of other files this is the original transcription of the native language consultants named in 1.6. In the tiers **ts** and **tx** a Latin-based phonological transcription is used instead of the Cyrillic script. The transcription is based on principles of both IPA and FUT (Finno-Ugric Transcription). Vowel length is marked by <V:>, i.e. the sign "Modifier Letter Triangular Colon" after the vowel grapheme. Consonant length is indicated by doubling the consonant grapheme. Diphthongs are marked by <V͡V>, i.e. both components of the diphthong combined with the sign "Combining Double Inverted Breve". Palatalization is marked by <C'>, i.e. the consonant grapheme with the sign "Modifier Letter Apostrophe". Since the phonological transcription bases on principles used in all INEL corpora, it differs at several points from the Turcologist transcription developed in *Turkic Languages* [TL] (cf. Johanson & Csató 1998). This is particularly relevant for the representation of long vowels (<V:> in INEL vs. <V̄> in TL) and the representation of the high unrounded back vowel (<ɨ> in INEL vs. <ï> in TL). In the corpus the Charis SIL font is used. The following characters are used in the transcriptions:

Table 1: INEL Dolgan transcription

INEL transcription		**IPA correspondence**		**Cyrillic orthography**		**Meaning**
a	at	a	at	а	ат	‘horse’
e	ebe	ɛ	ɛbɛ	е	эбэ	‘river’
o	ogo	ɔ	ɔgɔ	о	ого	‘child’
ö	öl	œ	œl	ө	өл	‘to die’
ɨ	ɨŋɨr͡ɨa	ɨ	ɨŋɨr͡ɨa	ы	ыңырыа	‘bee’
i	ilim	i	ilim	и	илим	‘net’
u	uskaːn	u	uskaːn	у	ускаан	‘hare’
ü	üs	y	ys	ү	үс	‘three’
ɨ͡a	ɨ͡al	ɨ͡a	ɨ͡al	ыа	ыал	‘neighbour’
i͡e	bi͡es	i͡ɛ	bi͡ɛs	иэ	биэс	‘five’
u͡o	ku͡oska	u͡ɔ	ku͡ɔska	уо	куоска	‘cat’
ü͡ö	ü͡ös	ÿ͡œ	ÿ͡œs	үө	үөс	‘stomach’
p	paŋkaː	p	paŋkaː	п	паңкаа	‘big tea kettle’
b	bar	b	bar	б	бар	‘to go’
t	taba	t	taba	т	таба	‘reindeer’
d	dogor	d	dɔgɔr	д	догор	‘friend’
k	kutujak	k	kutujak	к	кутуйак	‘mouse’
g	gini	g	gini	г	гини	‘he; she; it’
č	čeːlke	ʧ	ʧɛːlkɛ	ч	чээлкэ	‘white’
d’	d’on	ʄ	ʄɔn	дь	дьон	‘people’
s	üs	s	ys	с	үс	‘three’
h	hahɨl	h	hahɨl	һ	һаһыл	‘fox’
l	leŋkej	l	lɛŋkɛj	л	лэңкэй	‘snow owl’
r	ürek	r	yrɛk	р	үрэк	‘river’
m	munnu	m	munnu	м	мунну	‘nose’
n	nuːraj	n	nuːraj	н	нуурай	‘to doze off’
n’	n’aːlagaj	ɲ	ɲaːlagaj	нь	ньаалагай	‘midge’
ŋ	üŋkü:leː	ŋ	yŋkyːlɛː	ң / ҥ	үңкүүлээ / үҥкүүлээ	‘to dance’

Most of the transcription is written with small letters. Only the first letters of sentences (i.e. after a full stop, question mark, exclamation) and the first letters of proper nouns are written with capital letters. Punctuation follows mostly English punctuation rules. Direct speech is indicated with double inverted commas, e.g. *He said: “The weather is fine today.”*.

2.6.3. Folder structure

The entire corpus is contained in the folder “DolganCorpus” which has the following files and subfolders.

Folders with text transcripts, organized by genre:

- “conv” (conversations)
- “flk” (folklore texts)
- “nar” (narrative texts)
- “sng” (songs)
- “transl” (texts translated from Russian into Dolgan)

Each of these genre folders contains one further subfolder per each communication, named identically to the communication name (see **Hiba! A hivatkozási forrás nem található.**). Each communication f older contains several files with the same filename identical to the communication name, and different extensions according to the file type (see 2.7 for details on file formats):

- annotated transcript in EXMARaLDA, EXB and EXS formats (*.exb, *.exs)
- sound file in WAV (*.wav) (for texts with audio source)
- scanned pages from [FD 2000] (*.pdf) for the folklore texts from [FD 2000]

Supplementary folders:

- “documentation” (contains user documentation)
- “corpus-utilities” (contains conversion settings, stylesheets and annotation panels used with EXB transcriptions)

Individual files:

- “dolgan.coma” (main metadata file)

2.6.4. Transcripts

The names of the transcript files have the structure Speaker_DateOfRecording_Title_Genre, i.e. the same as the respective communication code in the metadata (see **Hiba! A hivatkozási forrás nem található.** f or details). The segmented transcript files additionally have a “_s” suffix in the end of their name. The file name extensions are .exb and .exs for the basic and segmented transcript files respectively (see 2.7.1).

2.6.5. Media

The names of the audio and video files have the structure *Speaker_DateOfRecording_Title_Genre*, i.e. the same as the respective communication code in the metadata (see 2.6.7 for details). The same holds true for the scans of the already published folklore texts from [FD 2000] in PDF format.

2.6.6. Metadata

The main metadata file for the corpus is the *dolgan.coma* file stored in the main corpus folder (EXMARaLDA Coma format; see 2.7.2 and 2.9 for details). It contains the metadata on speakers and on individual communications (texts).

2.6.7. Names of communications

The codes of the communications which are used as their IDs throughout the corpus are composed of the following components: speaker code (see 2.6.8), date of recording, communication short title, genre abbreviation. These components are joined by underscore ("_").

The exact date is mentioned in the communication code if known, in the format YYYYMMDD. If the day or both the day and the month are unknown, they are omitted (thus YYYYMM or YYYY). If the year of recording is only approximate or altogether unknown, a placeholder character "X" is used to fill the missing digits (e.g., "196X"). In the communication metadata, only the year of recording is specified.

The communication short title is a (possibly shortened) version of the English title, spelled without spaces, dashes or other non-letter characters, with all initial capitals. This English title is usually a translation of the Russian title, which is generally given by the corpus creators, however, in some cases the titles follow existing publications.

The genre abbreviation can have one of the values *flk* (folklore), *nar* (narrative), *conv* (conversation), *sng* (song) and *transl* (translation).

In what follows an example of communication code can be seen:

Code: PoNA_19900810_TripToVolochanka_nar

Speaker: PoNA (Popov, Nikolaj Anisimovich, see 2.6.8)

Date of recording: 10.08.1990

Short title: Trip To Volochanka

Genre: narrative

2.6.8. Speaker codes

The codes for the speakers are made up of two letters pointing at the last name, one letter pointing at the surname and one letter pointing at the patronymic. E.g. PoNA stands for Popov, Nikolaj Anisimovich (Po = Popov, N = Nikolaj, A = Anisimovich).

2.6.9. Abbreviations

The texts in the corpus were collected by different people, both linguists and non-linguists, and the work in the corpus was done by several people. The abbreviations for all those people as used in the corpus metadata are as follows:

2.6.9.1. Data collectors and editors

AkAE: Aksyonova, A.E. (radio journalist at the Taymyr radio station)

AkEE: Aksyonova, Evdokiya Egorovna (radio journalist at the Taymyr radio station, Dolgan poetess, developer of the first Dolgan writing system)

AsKS: Aslamova, Klavdiya Stepanovna (radio journalist at the Taymyr radio station)

AkPG: Aksyonova, Praskov'ya Gavrilovna (radio journalist at the Taymyr radio station)

EfPE: Efremov, Prokopij Eliseevich (Yakut folklorist and ethnographer)

KuNS: Kudryakova, Nina Semyonovna (radio journalist at the Taymyr radio station; head of the Department of folklore and ethnography of the TDNT)

PoAA: Popov, Andrej Aleksandrovich (Russian ethnographer)

UjNN: Ujgurov, N.N. (participant of fieldwork excursions of P.E. Efremov)

VoMS: Voronkin, M.S. (participant of fieldwork excursions of P.E. Efremov)

XaMP: Xarlampiev, Mark Pavlovich (radio journalist at the Taymyr radio station)
ZeA: Zelenkina, A. (radio journalist at the Taymyr radio station)
ZJ: Ziker, John (American ethnographer, working with Dolgans in the 1990s)

2.6.9.2. Project members

AAV: Arkhipov, Alexandre
BrM: Brykina, Maria
DCh: Däbritz, Chris Lasse
PN: Partanen, Niko
SE: Stapert, Eugénie

2.6.9.3 Student assistants

DO: Degtyareva, Olesya
KH: Klitzing, Hannes

2.6.9.4 Language consultants (transcription and translation)

EsAE: Eske, Adeya Evdokimovna
KuE: Kudryakov, Egor
KuNS: Kudryakova, Nina Semyonovna
KuSS: Kudryakova, Svetlana Semyonovna
TuA: Tuprina, Alexandra
TuI: Tuprin, Illarion

2.7. Technical formats

2.7.1. Transcripts

The annotated transcripts are delivered in the formats of the EXMARaLDA software suite, all of them in XML. The main transcript file which can be used for browsing the transcript with the EXMARaLDA Partitur Editor is the "basic transcription" format (EXB). From the basic transcription, a supplementary "segmented transcription" (EXS) is automatically generated which is necessary to make searches across the corpus with the EXMARaLDA EXAKT corpus search tool and to provide word and sentence counts. (Note that the segmented transcription files are **not** to be opened with the Partitur Editor.) The respective file extensions are ".exb" and ".exs".

2.7.2. Metadata

The corpus metadata are created in the EXMARaLDA Coma (corpus manager) and stored in the Coma XML format (file extension ".coma"). One file holds the metadata for the whole corpus.

2.7.3. Media

Audio files are provided in Linear PCM WAVE format (file extension ".wav") mono, with 44 100 Hz sampling frequency and 16 bit depth. However, it should be noted that in many cases it is not their original format, since the TDNT recordings originated mostly as analog and were further digitized and stored as MP3 files.

For the previously published folklore texts, corresponding pages scanned from [FD 2000] are provided in PDF format (file extension ".pdf").

2.7.4. Other data

No other data types are provided with the corpus.

2.8. Workflow of the source files

2.8.1. Transcripts

The workflow differs depending on the source type of the respective text.

- Texts from the folklore volume [FD 2000] were scanned with subsequent OCR (in Abbyy Fine Reader) and saved as plain text, then converted to Toolbox text format (aka SIL's Standard Format). The resulting Toolbox files were imported into *SIL Fieldworks Language Explorer* (FLEx) [9] for glossing.
- The audio files received from the TDNT were transcribed and translated into Russian by local consultants in *SayMore*[10], which saves natively into ELAN format. They were further edited in *ELAN*[11] (conversion from Cyrillic into Latin-based INEL transcription, punctuation clean-up, changes to time-alignment and sentence breaks, assignment of speaker attributes, etc.). After that, the files were saved as FLEXTEXT files and imported into FLEx for glossing (the time-alignment and speaker attributes being imported and preserved in FLEx as well).
- The audio files from Eugénie Stapert's collection were transcribed in ELAN by Eugénie Stapert with the help of local consultants. Some previously glossed texts (in Toolbox) were re-imported into ELAN. After that, all ELAN files were saved as FLEXTEXT files and imported into FLEx for (re-)glossing.
- The audio files of the experiment on social cognition was transcribed in ELAN by Chris Lasse Däbritz with the help of local consultants. After that it was likewise saved as FLEXTEXT and imported into FLEx for glossing.

The tiers imported into FLEx are **ts** (main transcription), **st** (original Cyrillic transcription, if exists), **ltr** (original Russian translation), **fe** (English free translation, for texts from Eugénie Stapert's collection), and **nt** (comments).

For all transcripts, the morphological analysis (interlinear glossing) is done in FLEx. This is when all the morpheme-level tiers are created (**mb, mp, ge, gg, gr, mc**), as well as the part-of-speech tier (**ps**). For most texts except those from [FD 2000], the **BOR** tier is also filled directly from the FLEx lexicon.

As soon as glossing is complete, a text is exported from FLEx as FLEXTEXT XML and converted to EXMARaLDA EXB format. During this conversion, the **ref** tier is created which combines communication code and sentence numbering (see below). There are also some changes to the **tx** tier concerning punctuation and to the morpheme-level tiers concerning the representation of zero morphs (see below).

After that, all further annotating (and editing) is done in the *EXMARaLDA Partitur-Editor*[12] (see also 2.10).

[9] https://software.sil.org/fieldworks/, last access: 02.04.2020.

[10] https://software.sil.org/saymore/, last access: 02.04.2020.

[11] https://tla.mpi.nl/tools/tla-tools/elan/, last access: 02.04.2020.

[12] http://exmaralda.org/en/partitur-editor-en/, last access: 02.04.2020.

2.8.2. Media files

The sound files provided by TDNT in MP3 format were eventually converted into Linear PCM WAVE files (44 100 Hz sampling frequency, 16 bit depth).

2.8.3. Metadata

The metadata of the corpus are managed in *EXMARaLDA Corpus Manager* (Coma)[13].
The metadata of the communications provided by the TDNT were supplied in an MS Word document, converted into an Excel spreadsheet and manually transferred into Coma.
The metadata for materials from Eugénie Stapert's collection were provided in an Excel spreadsheet and likewise transferred manually into Coma.

2.9. Metadata for the corpus

The metadata of the corpus are stored in *EXMARaLDA Coma* format. It is an XML-based format with separate interlinked descriptions for communications (texts; also analogous to IMDI "sessions") and speakers. The fields contained in the descriptions are listed in the following sections. This includes for example the location and date of a communication, but also information on which part of the processing and analysis was done by whom. Metadata about speakers contains mainly biographical data, but also basic data on language proficiency.

2.9.1. Naming conventions and content of the metadata

The general metadata about the whole corpus include the corpus name ("INEL Dolgan Corpus") and some basic metadata fields complying with the standards of DC (Dublin Core), OLAC (Open Language Archive Community) and HZSK (Hamburger Zentrum für Sprachkorpora).

2.9.2. Communication metadata

Name: The code which is given to the communication (see 2.6.6.1)
Description:

- **0a. Title:** Complete title of the communication.
- **0b. Title (RU):** Complete title of the communication in Russian.
- **1. Genre:** Abbreviation of the genre of the communication (flk = folklore, nar = narrative, conv = conversation, sng = song, transl = translation); note that two persons included not necessarily mean that the communication is a conversation: e.g. there are some communications where one person utters four or five sentences and the other person is talking independently, in those cases we name both speakers but specify the genre as *flk* or *nar*.
- **2a. Recorded by**: Abbreviation of the person by whom the communication was recorded (may be both linguists and non-linguists, see 2.6.6.3).
- **2b. Date of recording:** Here the date of recording is given (year only).
- **3. Dialect:** If possible, information on the dialect used by the speaker(s) is given here.
- **4. Speaker(s):** Code(s) of the speaker(s).
- **5a. Transcribed by:** Code of the person who did the transcription.
- **5b. Date of transcribing:** The exact date (if it is known) of the transcribing.
- **5d. Time-Aligned by:** Abbreviation of the person who aligned the sound to the transcription.

[13] http://exmaralda.org/en/corpus-manager-en/, last access: 02.04.2020.

- **6a. Processed by:** Abbreviation of the person who processed (i.e. all technical work before any linguistic analysis; conversions, OCR, sound clearing etc.) the file.
- **6b. Date of processing:** The exact date (if it is known) of the processing.
- **7a-c. Translation(s):** Abbreviation of the person who did the translation in question (Russian, English, German).
- **8a. Glossed by:** Abbreviation of the person who did the glossing.
- **8b. Glosses checked:** Abbreviation of the person who checked the glossing.
- **9a-f. Annotation(s):** Abbreviation of the person who did the annotation in question (SeR, SyF, IST, BOR/CS, Top, Foc,; see 2.10).

Location:

- **Country:** The country where the recording took place; this is always Russia.
- **Region:** The region where the recording took place; this is either Taymyr peninsula (until 1930), Taymyr (Dolgano-Nenets) Autonomous Okrug (1930-2007), Taymyr Dolgano-Nenets District (since 2007).
- **Settlement (LngLat):** Longitude and latitude of the place of recording.
- **Settlement:** The settlement where the recording took place.

Languages:

- **Language code:** The language code of the communication (*dlg* – Dolgan; *rus* – Russian).

Setting: In this section some information about archive sources and existing publications is given.

- **1a. Archive (sound):** In case of the TDNT material, the original disc and track numbers of the file are given here.
- **1b. Start-end time:** If known, the start and ending time of the latter is given.
- **2. Published in:** If the text was published, we give the data of the publication**.** This is relevant for the texts from [FD 2000], here also the text number in the volume is given.
- **2b. Published in (bibtex):** Here, publication data are given in bibtex format.

Recording: If an audio file is available, it is linked to the communication description.

Transcriptions: The basic transcription (.exb) and the segmented transcription (.exs) are linked here to the communication description; the latter is needed for searching the corpus.

Attached file(s): If there are additional files (e.g. scans of published communications), they are linked to the communication description here.

2.9.3. Speaker metadata

Metadata about the speaker(s) taking part in a communication include, on the one hand, biographical information of the speaker, and on the other hand, information on his/her sociolinguistic background. However, due to the great variety of communications and speakers, it is not always possible to give detailed speaker metadata. The following information is given as exactly as possible:

Description of speaker:

- **1a. Family name:** Family name of the speaker (Latin script).
- **1b. Family name (RU):** Family name of the speaker (Cyrillic script).
- **2a. Given name:** Given name of the speaker (Latin script).
- **2b. Given name (RU):** Given name of the speaker (Cyrillic script).
- **3a. Patronymic:** Patronymic of the speaker (Latin script).
- **3b. Patronymic (RU):** Patronymic of the speaker (Cyrillic script).

- **4. Vulgo (Dolgan name):** Before getting Russian namens, Dolgans had their own names and principles of naming persons; if the Dolgan name of a speaker is known, it is given here.
- **5a. Alternate names:** If there are different spellings of names or maiden names etc., they are given here (Latin script).
- **5b. Alternate names (RU):** If there are different spellings of names or maiden names etc., they are given here (Cyrillic script).

Basic biographical data: Here basic biographical data of the speaker is provided.

- **1a. Place of birth:** Place of birth of the speaker (Latin script).
- **1b. Place of birth (RU):** Place of birth of the speaker (Cyrillic script).
- **2. Region:** Region where the speaker was born; this is mostly Taymyr peninsula (until 1930), Taymyr (Dolgano-Nenets) Autonomous Okrug (1930-2007), Taymyr Dolgano-Nenets District (since 2007).
- **3. Country**: Country where the speaker was born; this is always Russia.
- **4. Date of birth:** The speaker's date of birth.
- **5. Date of death:** If the speaker already died, the speaker's date of death.
- **6a. Former residences:** Former residences of the speaker (Latin script).
- **6b. Former residences (RU):** Former residence of the speaker (Cyrillic script).
- **7a. Domicile**: Location where the speaker lived at the time of the recording (Latin script).
- **7b**. **Domicile (RU):** Location where the speaker lived at the time of the recording (Cyrillic script).

Education: Here information is given – if available – on the speaker's education and occupation/profession.

- **1a. Education:** Here information on basic education (i.e. school) of the speaker is given (English).
- **1b. Education (RU):** Here information on basic education (i.e. school) of the speaker is given (Russian).
- **2a. Higher education:** If the speaker has had higher education, it is mentioned here (English).
- **2b. Higher education (RU):** If the speaker has had higher education, it is mentioned here (Russian).
- **3a. Occupation:** Here the profession and/or occupation of the speaker is mentioned (English).
- **3b. Occupation (RU):** Here the profession and/or occupation of the speaker is mentioned (Russian).

Informant of: Here it is mentioned with whom the speaker worked. However, only linguists doing linguistic fieldwork with them and not radio journalists are named here.

Ethnicity: Here information about the ethnicity of the respective speaker and his/her family members is given.

- **1. Ethnicity:** Ethnicity of the speaker.
- **2a. Ethnicity of mother:** Ethnicity of the speaker's mother.
- **2b. Name of mother:** Name of the speaker's mother.
- **3a. Ethnicity of father:** Ethnicity of the speaker's father.
- **3b. Name of father:** Name of the speaker's father.
- **4a. Ethnicity of husband/wife:** Ethnicity of the speaker's husband/wife.
- **4b. Name of husband/wife:** Name of the speaker's husband/wife.

- **5a. Ethnicity of grandparents:** Ethnicity of the speaker's grandparents.
- **5b. Name of grandparents:** Name of the speaker's grandparents.
- **6a. Family:** Other family members.
- **6b. Family (RU):** Other family members (Russian).

Languages: Here we give the language codes (*dlg* notes Dolgan, *rus* Russian, *sah* Sakha/Yakut) for the languages the speaker has command of.

- **L1**
  - **1. First language:** The speaker's first language.
  - **2. Dialect:** Dialect of the speaker's first language.
- **L2**
  - **1. Second language:** The speaker's second language.
  - **2. Dialect:** Dialect of the speaker's second language.

2.10. Transcription and annotation

At this point it should be remarked that a lot of ideas and principles of transcription and annotation go back to the Nganasan Spoken Language Corpus (NSLC) (Brykina et al. 2018), a documentation of this are the respective user guidelines (Wagner-Nagy et al. 2018). This holds especially true for the annotation principles and annotation schemes for the annotation of semantic roles (SeR), syntactic functions (SyF) and information status (IST), as will be shown in the respective sections.

2.10.1. Tier layout

Every annotation tier has a distinct label (see left column in the table) which is shown in the respective EXB file. In case of multi-speaker transcripts, this label is extended with the speaker code, e.g. *ref-KuNS* or *tx-MiXS*. The following table shows all occurring tiers and gives a short description of them.

Table 2: Overview of annotation tiers

Tier label	Tier name	Description	Unit	Optionality
ref	Reference	Text ID + sentence number	sentence	obligatory
st	Source transcription	1) cyrillic text from [FD 2000] 2) original transcription of the local consultants	sentence	optional
ts	Text (sentence)	Main transcription	sentence	obligatory
tx	Text (word)	Main transcription segmented by word for interlinearization	word	obligatory
mb	Morpheme breaks	Morpheme breakdown of words	morph	obligatory
mp	Morphophonemes (underlying)	Underlying (lexical) forms of morphemes	morph	obligatory
ge	Gloss (English)	Morpheme glosses (with lexical glosses in English)	morph	obligatory
gg	Gloss (German)	Morpheme glosses (with lexical glosses in German)	morph	obligatory

Tier label	Tier name	Description	Unit	Optionality
gr	Gloss (Russian)	Morpheme glosses (with lexical glosses in Russian)	morph	obligatory
mc	Morphological category	Morphological category/part of speech for each morpheme	morph	obligatory
ps	Part of speech	Part of speech for each word	word	obligatory
SeR	Semantic Role	Semantic (thematic) roles for major NPs	word	optional
SyF	Syntactic function	Syntactic functions for predicates and arguments	word	optional
IST	Information status	Information status for major NPs (given/new/accessible)	word	optional
Top	Topic	Topic-comment-structure	group of words	optional
Foc	Focus	Focus-background-structure	group of words	optional
BOR	Borrowing	Borrowings (source language and type)	word	optional
BOR-phon	Borrowing phonology	Phonological adaptations in borrowings	word	optional
BOR-morph	Borrowing morphology	Morphological adaptations in borrowings	word	optional
CS	Code switching	Code switching and calques (source language and type)	group of words	optional
fe	Free translation (English)	Free translation (English)	sentence	obligatory
fg	Free translation (German)	Free translation (German)	sentence	obligatory
fr	Free translation (Russian)	Free translation (Russian)	sentence	obligatory
ltr	Literal translation (Russian)	1) Original translation in [FD 2000] 2) Literal translation of the local consultants	sentence	optional
nt	Notes	Notes from corpus developer	sentence	optional

2.10.2. Transcription tiers

2.10.2.1 Main transcription tiers (tx, ts)

The transcription tier (**tx**) is the most important tier in the transcriptions, as it contains the main transcription segmented into words and is the basis for all further annotations. The transcription tier uses the orthography described in 2.6.2. The transcription tier is derived from the tier **ts** and is the basis for the morpheme breakdown in the tier **mb**.

(1)

tx	Ihilletebit	l'it'eraturnaj	p'er'edač'ani.
fe[14]	We broadcast a literary programme.		

The transcription tier (**ts**) contains a transcription of the utterances which is partly phonological, partly phonetic. Not each and every idiosyncratic instance of variation is marked here, but major deviations from so-called "standard" forms are marked. E.g. the variation of the lexeme for 'head' *men'i:* ~ *meji:* is taken into account, but not e.g. the phonetic realization [ɔ] ~ [o] ~ [o̜] of the phoneme /o/. Russian words and code-switches are represented the same way, i.e. not transliterated from Standard Russian orthography, e.g. if the lexeme for 'milk' <молоко> is pronounced with Akanye, i.e. [malako], then it is written also as *malako*. However, phonetic details cannot be covered here, so the differences in vowel reduction in immediately pre-stressed syllables and all other syllables are not taken into account. Consonant palatalization in Russian words and code-switches, if pronounced, is indicated consequently.

(2)

ts	Ihilletebit l'it'eraturnaj p'er'edač'ani.		
tx	Ihilletebit	l'it'eraturnaj	p'er'edač'ani.
fe	We broadcast a literary programme.		

Often, there are additional features in the sound files that have to be dealt with, e.g. uncertainties and hesitations of the speakers, but also laughter or noise. These features are indicated in the transcription according to Arkhipov (forthc.).

2.10.2.2 Source transcription (st)

The source transcription tier (**st**) contains the original version of the text in question, if available. In case of the folklore texts from the volume [FD 2000] it is the original text from the book. In case of the recordings made available by the TDNT that is the original transcription as done by native speakers. In each case this means that Cyrillic script is used.

(3)

st	Иниллэтэбит литературнай передачаны.		
ts	Ihilletebit l'it'eraturnaj p'er'edač'ani.		
tx	Ihilletebit	l'it'eraturnaj	p'er'edač'ani.
fe	We broadcast a literary programme.		

2.10.3. Annotation tiers

2.10.3.1 Reference (ref)

The reference tier (**ref**) for each sentence contains the communication code and the number of the sentence, separated by dot. The sentences are numbered through the entire text. The sentence numbers are zero-padded up to 3 digits. In brackets, the numbering according to the FLEx scheme is given (*paragraph_number.sentence_number*).

[14] "fe" stands for 'free English translation' (see 2.10.3.14). It is introduced already here in order to make the examples understandable.

(4)

ref	AsKS_19XX_Amulet_nar.001 (001.001)		
st	Инициэтэбит литературнай передачаны.		
ts	Ihilletebit l'it'eraturnaj p'er'edač'anɨ.		
tx	Ihilletebit	l'it'eraturnaj	p'er'edač'anɨ.
fe	We broadcast a literary programme.		

If there is a multi-speaker transcript, then the sentences are counted for every speaker separately. Moreover, then the speaker code of the respective speaker is once more mentioned between communication code and sentence number. Two subsequent sentences of different speakers can, hence, have e.g. the following information in the reference tier: *KiPP_KuNS_200211_LifeChildren_conv.KuNS.072 (001.238)* and the following reply *KiPP_KuNS_200211_LifeChildren_conv.KiPP.167 (001.239)*.

2.10.3.2 Morpheme breaks (mb)

The morpheme breaks tier (**mb**) breaks words into segmentable morphemes. Each word – according to the tier **tx** – appears in a separate cell. The morphemes are still represented with their surface structure and are separated from each other by hyphens. Zero morphs are not represented in this tier.

(5)

ref	AsKS_19XX_Amulet_nar.001 (001.001)		
tx	Ihilletebit	l'it'eraturnaj	p'er'edač'anɨ.
mb	ihill-e-t-e-bit	l'it'eraturnaj	p'er'edač'a-nɨ
fe	We broadcast a literary programme.		

2.10.3.3 Morphophonemes (underlying) (mp)

The underlying morphemes tier (**mp**) shows the deep structure of the morphemes which were separated from each other in **mb**. Stems are, thus, represented here by their lexical entry in the FLEx lexicon. Affixes are represented in their morphonological deep structure. The deep forms are written according to turcological tradition (cf. Johanson & Csató 1998) and partly adapted to the requirements of Dolgan (mor)phonology, the following chart shows the usage:

Table 3: Representation of deep phonemes

Deep phoneme	Phonological class	Possible realizations
I	high/closed vowels	ɨ, i, u, ü
A	low/open vowels	a, e, o, ö
B	labial consonants	p, b, m
T (suffix-initially) and L	dental-alveolar consonants	t, d, n, l
K (suffix-initially) and G	velar consonants	k, g, ŋ
T (suffix-finally)	voiceless stops	p, t, k
K (suffix-finally)	velar stops	k, g
Č[15]	---	č, d', h, s

[15] Č appears only in the suffix -ČIt, marking an agent noun.

(6)

ref	AsKS_19XX_Amulet_nar.001 (001.001)		
tx	Ihilletebit	l'it'eraturnaj	p'er'edač'ani.
mb	ihill-e-t-e-bit	l'it'eraturnaj	p'er'edač'a-ni
mp	ihilin-A-t-A-BIT	l'it'eraturnaj	p'er'edač'a-nI
fe	We broadcast a literary programme.		

Zero morphs are mostly not yet represented in **mp**. However, there are two instances where zero morphs are indicated in **mp**, too. This is on the one hand the suffix -tA in future tense, 3rd person singular, or future participle plus possessive suffix, 3rd person singular, and on the other hand the causative suffix -t. These suffix do not have a surface representation but cause (mor)phonological changes in stems or other suffixes. Therefore, we decided to indicate them in **mp**. The following chart illustrates this – here the causative suffix causes fortition of the suffix-initial -B, but does not occur on the surface structure because the consonant cluster **rtp* would be prohibited due to Dolgan phonotactics:

(7)

ref	KiPP_KuNS_200211_LifeChildren_conv.KiPP.100 (001.139)	
tx	[...] olorpotoktoro	bihigini, [...]
mb	olor-potok-toro	bihigi-ni
mp	olor.[t]-BAtAK-LArA	bihigi-nI
fe	[...] they didn't let us sit, [...]	

2.10.3.4 Gloss (ge, gg and gr)

The gloss tiers (**ge**, **gg** and **gr**) contain the English, German and Russian glossing of the morphemes in **mb** and **mp**. Stems receive their respective lexical glosses in the three languages, while affixes are glossed identically in latin script and mostly according to the Leipzig Glossing Rules[16]. For the list of abbreviations used and the list of affixes occurring in the corpus, see Appendix 1 and Appendix 2 respectively. Glosses for all morphemes within a word are separated with hyphens. Non-overt morphemes are given in square brackets preceded by a dot (e.g. ".[3SG]").

If a morpheme contains two or more semantic components, then they are separated by a dot, for more convenient reading that does not hold true for the combination of person and number (e.g. IMP.2SG). The order of the semantic components is:

- mood – person/number: IMP.2SG (imperative, 2nd person singular)
- tense – negation: PST2.NEG (past tense 2, negative)
- (negation) – non-finite form – specification of the form: PTCP.PRS (present participle), NEG.CVB.SIM (negative simultaneous converb) etc.

Alternative meanings are separated by a slash (e.g. DAT/LOC and RECP/COLL). Morphemes with unknown meaning are glossed with two percent signs (%%).

[16] https://www.eva.mpg.de/lingua/resources/glossing-rules.php, last access: 02.04.2020.

(8)

ref	AsKS_19XX_Amulet_nar.001 (001.001)		
tx	Ihilletebit	l’it’eraturnaj	p’er’edač’ani.
mb	ihill-e-t-e-bit	l’it’eraturnaj	p’er’edač’a-nɨ
mp	ihilin-A-t-A-BIT	l’it’eraturnaj	p’er’edač’a-nI
ge	be.heard-EP-CAUS-PRS-1PL	literary	programme-ACC
gg	gehört.werden-EP-CAUS-PRS-1PL	literarisch	Sendung-ACC
gr	слышаться-EP-CAUS-PRS-1PL	литературный	передача-ACC
fe	We broadcast a literary programme.		

(9)

ref	AsKS_19XX_Amulet_nar.009 (001.009)		
tx	Ogonn’or	töttörü	kan’ispat.
mb	ogonn’or	töttörü	kan’is-pat
mp	ogonn’or	töttörü	kan’is-pat
ge	old.man.[NOM]	zurück	look.around-NEG.[3SG]
gg	alter.Mann.[NOM]	back	sich.umsehen-NEG.[3SG]
gr	старик.[NOM]	назад	осмотреться-NEG.[3SG]
fe	The old man does not look back.		

2.10.3.5 Morphological category (mc)

The morphological category tier (**mc**) indicates the morphological category of both lexical stems and affixes (i.e. the inflectional category or the derivational process). The following tables show the tags used for lexical stems and inflectional categories; derivational processes are marked as x > y, x and y being the tags for lexical stems:

Table 4: Tags for lexical stems

Tag	**Comment**
adj	adjective
adv	adverb
cardnum	cardinal numeral
conj	conjunction
dempro	demonstrative pronoun
emphpro	emphatic pronoun
indfpro	indefinite pronoun
interj	interjection
n	noun
ordnum	ordinal numeral
pers	personal pronoun
posspr	possessive pronoun
post	postposition
propr	proper noun

Tag	Comment
ptcl	particle
quant	quantifier
que	interrogative pronoun
reflpro	reflexive pronoun
v	verb

Table 5: Tags for inflectional categories

Tag	Comment
Inflection of nominals	
n:case	case suffix at nouns (also at adjectives and numerals)
n:ins	epenthetic vowel at nouns (also at adjectives and numerals)
n:num	number suffix at nouns (also at adjectives and numerals)
n:poss	possessive suffix at nouns (also at adjectives and numerals)
n:pred.pn	person-number suffix (predicative row) at nouns (also at adjectives and numerals)
pro:case	case suffix at pronouns
pro:ins	epenthetic vowel at pronouns
pro:poss	possessive suffix at pronouns
pro:pred.pn	person-number suffix (predicative row) at pronouns
Inflection of verbs	
v:case	case suffix at verbs (non-finite forms)
v:cvb	converb suffix at verbs
v:ins	epenthetic vowel at verbs
v:mood	mood suffix at verbs
v:mood.pn	mood and person-number suffix at verbs
v:neg	negation suffix at verbs
v:num	number suffix at verbs (non-finite forms)
v:poss	possessive suffix at verbs (non-finite forms)
v:poss.pn	person-number suffix (possessive row) at verbs
v:pred.pn	person-number suffix (predicative row) at verbs
v:ptcp	participle suffix at verbs
v:temp.pn	person-number suffix (temporal row) at verbs
v:tense	tense suffix at verbs
Inflection of particles[17]	
ptcl:case	case suffix at particles
ptcl:ins	epenthetic vowel at particles
ptcl:mood	mood suffix at particles
ptcl:num	number suffix at particles
ptcl:poss	possessive suffix at particles

[17] Particles are listed separately here, as they can take both “nominal” and “verbal” suffixes.

Tag	Comment
ptcl:poss.pn	person-number suffix (possessive row) at particles
ptcl:pred.pn	person-number suffix (predicative row) at particles
ptcl:temp.pn	person-number suffix (temporal row) at particles

The following chart shows an example of how morpheme classes are represented:
(10)

ref	AsKS_19XX_Amulet_nar.001 (001.001)		
tx	Ihilletebit	l'it'eraturnaj	p'er'edač'ani.
mb	ihill-e-t-e-bit	l'it'eraturnaj	p'er'edač'a-nɨ
mp	ihilin-A-t-A-BIT	l'it'eraturnaj	p'er'edač'a-nI
ge	be.heard-EP-CAUS-PRS-1PL	literary	programme-ACC
mc	v-v:ins-v > v-v:tense-v:pred.pn	adj	n-n:case
fe	We broadcast a literary programme.		

2.10.3.6 Part of speech (ps)

The part of speech tier (**ps**) contains information about the grammatical category of each word form. Hence, e.g. the outcome of derivational processes is marked here. The tags used are more or less the same as in the morphological category tier **mc**, moreover, there are the tags *aux* (auxiliary verb) and *cop* (copula). The copulas *bu͡ol-* and *e-* ~ *er-* are used for linking any constituent (mostly subject NPs) with a non-verbal predicate. The same verbs can also be used as auxiliary verbs. Moreover, in Dolgan there is a number of verbs which form so-called aspectual converb constructions (a.k.a. light verb constructions or serial verb constructions; cf. Däbritz 2019); those are also marked as *aux* in the part of speech tier.
(11)

ref	AsKS_19XX_Amulet_nar.060 (001.059)		
tx	Karabi:nɨn	hɨrgaga	ötü:le:bit.
mb	karabi:n-ɨ-n	hɨrga-ga	ötü:-le:-bit
mp	karabi:n-tI-n	hɨrga-GA	ötü:-LA:-BIT
ge	carbine-3SG-ACC	sledge-DAT/LOC	string-VBZ-PST2.[3SG]
mc	n-n:poss-n:case	n-n:case	n-n > v-v:tense-v:pred.pn
ps	n	n	v
fe	He tied his carbine up to the sledge.		

(12)

ref	AsKS_19XX_Amulet_nar.031 (001.030)	
tx	Egeli͡ek	ete.
mb	egel-i͡ek	e-t-e
mp	egel-IAK	e-TI-tA
ge	bring-PTCP.FUT	be-PST1-3SG
mc	v-v:ptcp	v-v:tense-v:poss.pn
ps	v	aux
fe	He would have brought [it].	

(13)

ref	AsKS_19XX_Amulet_nar.065 (001.064)		
tx	Hir	ürde:n	ispit.
mb	hir	ürde:-n	is-pit
mp	hir	ürde:-An	is-BIT
ge	mountain.[NOM]	get.higher-CVB.SEQ	go-PST2.[3SG]
mc	n-n:case	v-v:cvb	v-v:tense-v:pred.pn
ps	n	v	aux
fe	The mountain got higher.		

2.10.3.7 Semantic roles (SeR)

The Semantic roles tier (**SeR**) contains the annotation of semantic roles (a.k.a. thematic roles, theta-roles). The annotation is based on GRAID principles (cf. Haig & Schnell 2014) and the annotation scheme used was developed by Beáta Wagner-Nagy and Sándor Szeverényi (Wagner-Nagy et al. 2018: 21ff.) who also made it available for the project. The annotation takes into account form, animacy and semantic role of the referent, the tags are built up according to the scheme <form.animacy:semantic role>. If the referent is expressed by a whole phrase, then the semantic role is tagged at the head of the phrase. In postpositional constructions, the cells of the postposition and its complement are merged. Zero referents are tagged per default at the predicate of the sentence. Semantic roles are tagged both in main and in dependent clauses. The following tags for the form of the referent are used:

Table 6: Abbreviations for form of the referent

Abbreviation	**Comment**
0.1.	zero/covert first-person referent
0.2.	zero/covert second-person referent
0.3.	zero/covert third-person referent
adv	adverbial referent
np	nominal referent (noun phrase)
pp	postpositional phrase
pro	pronominal referent

In the category "animacy" human and non-human referents are differentiated. Human referents get the abbreviation <h>, non-human referents get no marking in this category. There are often borderline cases, especially in tales and legends. Here, it was decided that animals or other protagonists that act like humans are considered as human referents, thus, the respective linguistic expression tagged with <h>. The semantic roles which are tagged are explained in the following table:

Table 7: Semantic Roles tagged and their abbreviations

Semantic Role	**Abbreviation**	**Comment**
Agent	A	- volitional initiator of the action - the participant which is volitionally causing the action - can be both animate and inanimate - test agent vs. theme: add "on purpose" to the sentence – if it fits, then it is an agent, if not, then not
Beneficiary	B	- entity for whose benefit the action is performed
Cause	Cau	- entity (mostly non-human) that causes an event
Comitative	Com	- entity that convoys a participant of the action (a.k.a. as co-agent)
Experiencer	E	- entity that experiences the action or event - does not have a control over the action or event - verba sentiendi, i.e. verbs expressing emotion, volition, cognition, perception (i.e. verbs like: *see, love, hate, understand, hear, taste, frighten, wish, want, think, remember, feel*)
Goal	G	- location or entity in the direction of which something moves (i.e. directional location)
Instrument	Ins	- medium by which the action or event is performed
Location	L	- location or entity where an event takes or place or where something is located (i.e. stative location)
Path	Path	- entity or location along or through which the event takes place
Patient	P	- undergoer of the action - test patient vs. theme: does the referent change its quality during the action? – if yes, then patient - first arguments of unaccusative verbs such as *die, fall*
Possessor	Poss	- entity which owns something - both alienable and in-alienable possession - also inanimate referents (e.g. the top of the mountain)
Recipient	R	- (mostly animate) recipient of physical as well as mental transfer - addressee of verba dicendi
Source	So	- location or entity where a movement starts (i.e. directional location) - original owner in a transfer of something

Semantic Role	Abbreviation	Comment
Stimulus	St	- stimulus for physical perception, i.e. second actant of verbs like *see*, *hear*, *feel*, but NOT of verbs like *look for*, *listen*
Theme	Th	- entity which is moved or affected by some action (change of location or possession, object of transfer) - entity whose location is specified - test theme vs. agent: add "on purpose" to the sentence – if it does not fit, then it is (mostly) a theme, if it does fit, then agent - test theme vs. patient: does the referent change its quality during the action? – if no, then theme - object of possession (possessee)
Time	Time	- point or an interval of time

The following charts shows some examples of tagging Semantic Roles:

(14)

ref	AsKS_19XX_Amulet_nar.001 (001.001)		
tx	Ihilletebit	l'it'eraturnaj	p'er'edač'aniɨ.
mb	ihill-e-t-e-bit	l'it'eraturnaj	p'er'edač'a-niɨ
mp	ihilin-A-t-A-BIT	l'it'eraturnaj	p'er'edač'a-nI
ge	be.heard-EP-CAUS-PRS-1PL	literary	programme-ACC
ps	v	adj	n
SeR	0.1.h:A		np:Th
fe	We broadcast a literary programme.		

(15)

ref	AsKS_19XX_Amulet_nar.098 (001.097)					
tx	Aniɨ	gini	kʉ̂ʊ̈l	üstün	ünen	iher.
mb	aniɨ	gini	kʉ̂ʊ̈l	üstün	ün-en	ih-er
mp	aniɨ	gini	kʉ̂ʊ̈l	üstün	ün-An	is-Ar
ge	now	3SG.[NOM]	lake.[NOM]	along	crawl-CVB.SEQ	go-PRS.[3SG]
ps	adv	pers	n	post	v	aux
SeR	adv:Time	pro.h:A	pp:Path			
fe	Now he crawls along the lake.					

(16)

ref	AsKS_19XX_Amulet_nar.128 (001.127)		
tx	Ölüök͡pün	biler	du:.
mb	öl-üök͡-pü-n	bil-er	du:
mp	öl-IAK-BI-n	bil-Ar	du:
ge	die-PTCP.FUT-1SG-ACC	know-PRS.[3SG]	MOD
ps	v	v	ptcl
SeR	0.1.h:P	0.3.h:E	
fe	Apparently he knows that I will die.		

2.10.3.8 Syntactic function (SyF)

In the Syntactic function tier (**SyF**) basic syntactic functions (i.e. subject, direct object, predicate) are annotated. The annotation is also based on GRAID principles (Haig & Schnell 2014), and the annotation scheme used was developed by Beáta Wagner-Nagy and Sándor Szeverényi (Wagner-Nagy et al. 2018: 24ff.) who also made it available for the project. Hence, the tags are likewise built up according to the scheme <form.animacy:semantic role>. Subjects and direct objects are tagged at the head of the respective phrase, zero subjects are tagged at the predicate of the clause. For complex verbal predicates the cells of the main verb and the auxiliary are merged. The following tags are used:

Table 8: Tags for annotating syntactic functions

Abbreviation	**Comment**
Subject	
pro.h:S	pronominal human subject
pro:S	pronominal non-human subject
np.h:S	nominal human subject
np:S	nominal non-human subject
0.1.h:S	zero/covert first-person human subject
0.2.h:S	zero/covert second-person human subject
0.3.h:S	zero/covert third-person human subject
0.3:S	zero/covert third-person non-human subject
Direct Object	
pro.h:O	pronominal human direct object
pro:O	pronominal non-human direct object
np.h:O	nominal human direct object
np:O	nominal non-human direct object
Predicate	
v:pred	verbal predicate
n:pred	nominal predicate
adj:pred	attributive/adjectival predicate
pro:pred	pronominal predicate
ptcl:pred	particle predicate

In the category “animacy” human and non-human referents are differentiated. Human referents get the abbreviation <h>, non-human referents get no marking in this category. There are often borderline cases, especially in tales and legends. Here, it was decided that animals or other protagonists that act like humans are considered as human referents, thus, the respective linguistic expression tagged with <h>.

Moreover, copulas are tagged with the tag *cop*. Syntactic functions are only tagged in main clauses. Dependent/subordinate clauses are tagged separately, the cells belonging to the subordinate clause are merged. The tags are as follows:

Table 9: Tags for annotating subordinate clauses

Abbreviation	**Comment**
s:comp	complement clause (*I know that he goes.*)
s:rel	relative clause (*I know the man who is going home.*)
s:temp	temporal clause (*When I came home, nobody was there.*)
s:cond	conditional clause (*If he goes home now, I am really upset.*)
s:adv	adverbial clause (*He went home laughing loudly.*)
s:purp	purpose clause (*He went home to feed his cat.*)

The following charts show some examples of tagging syntactic functions:

(17)

ref	AsKS_19XX_Amulet_nar.001 (001.001)		
tx	Ihilletebit	l’it’eraturnaj	p’er’edač’ani.
mb	ihill-e-t-e-bit	l’it’eraturnaj	p’er’edač’a-ni
mp	ihilin-A-t-A-BIT	l’it’eraturnaj	p’er’edač’a-nI
ge	be.heard-EP-CAUS-PRS-1PL	literary	programme-ACC
ps	v	adj	n
SyF	0.1.h:S v:pred		np:O
fe	We broadcast a literary programme.		

(18)

ref	AsKS_19XX_Amulet_nar.128 (001.127)		
tx	Ölüök̈pün	biler	du:.
mb	öl-üök̈-pü-n	bil-er	du:
mp	öl-IAK-BI-n	bil-Ar	du:
ge	die-PTCP.FUT-1SG-ACC	know-PRS.[3SG]	MOD
ps	v	v	ptcl
SyF	s:comp	0.3.h:S v:pred	
fe	Apparently he knows that I will die.		

2.10.3.9 Information status (IST)

The Information status tier (**IST**) contains the annotation of information status. The annotation is based on the annotation guidelines for information structure and information status in Götze et al. (2007), the principles of annotation and the annotation scheme itself were developed by Wagner-Nagy et al.

(2018: 28ff.) and made available by them. According to Götze et al. (2007: 150) the information status (a.k.a. activation, cognitive status, givenness) of a discourse referent reflects its retrievability within the discourse in question. A referent can be either given, accessible or new which can be determined by using the parameters [± discourse-old] and [± hearer-old]:

Table 10: Parameters for determining information status

	+discourse-old	**- discourse-old**
+hearer-old	given	accessible
- hearer-old	---	new

In detail that means that given referents are necessarily and per default aforementioned in the discourse while accessible and new referents are not. Accessible referents can somehow (see below) be inferred by the "hearer" of the discourse. Hence, new referents are neither aforementioned nor inferable for the hearer. The basic tags for annotating information status are *giv*, *accs* and *new*, the extended tag set can be seen from the following table:

Table 11: Basic tags for annotating information status

Tag	**Comment**
Given referents	
giv-active	given and active referent (i.e. mentioned in the current or last sentence)
giv-inactive	given and inactive referent (i.e. mentioned before the last sentence)
Accessible referents	
accs-sit	referent, accessible through the situation (e.g. having breakfast: "Give me the butter, please.")
accs-aggr	referent, accessible through the aggregation of other referents (e.g. "*Unce upon a time, a king had a wife and two children. They lived happily.*")
accs-inf	referent, accessible through inference, e.g. part-whole relations (e.g. "*We had a turkey for thanksgiving. I ate its wings.*")
accs-gen	referent, accessible through general knowledge (e.g. "*The president of the U.S. travelled to Cuba.*")
New referents	
new	new referent

As Dolgan is a pro-drop language, many referents are not overtly realized in the clause. Therefore, the information status of non-overt referents is tagged, too. The tag set remains the same, the prefix <0.> is added to the tag in question (e.g. *0.giv-active* for a zero/covert given and active referent) and the referent is tagged at the predicate of the clause.

Another problem which was dealt with is the issue of direct speech: As it is widely known, direct speech tends to change the perspective of both the hearer and the speaker which has consequences for the discourse status of referents as well. Simply spoken, a referent in direct speech has got an information status within the whole discourse/communication (i.e. for the hearer of the whole communication) and an information status within the micro-discourse made up with the usage of direct

speech (i.e. for the hearer of the direct speech). As fine-grade discourse analysis is not the main goal of the project and would be very time-consuming, we decided to tag the information status of referents in direct speech on the level of the macro-discourse, i.e. the whole communication. However, in order to be aware of possible changes of perspective, the tag <-Q> was proposed by Wagner-Nagy et al. (2018: 29) – according to their guidelines this tag is used when a referent occurs in direct speech (ibid.). Furthermore, so-called utterance predicates are tagged by the tag *quot* and it is distinguished between speech and thought (*quot-sp* vs. *quot-th*) (ibid.). The following examples show how the information status is tagged:

(19)

ref	AsKS_19XX_Amulet_nar.001 (001.001)		
tx	Ihilletebit	l'it'eraturnaj	p'er'edač'ani.
mb	ihill-e-t-e-bit	l'it'eraturnaj	p'er'edač'a-ni
mp	ihilin-A-t-A-BIT	l'it'eraturnaj	p'er'edač'a-nI
ge	be.heard-EP-CAUS-PRS-1PL	literary	programme-ACC
ps	v	adj	n
IST	0.accs-sit		new
fe	We broadcast a literary programme.		

This is the first sentence of a radio programme, hence it is accessible through the situation that there are people broadcasting the programme, therefore the referent is tagged as *0.accs-sit*. The information what they broadcast is, however, new, therefore the referent is tagged as *new*.

(20)

ref	AsKS_19XX_Amulet_nar.112 (001.111)				
tx	"Huo͡k,	ünüö͡m,	ünüö͡m",	etiher	ogonn'or.
mb	huo͡k	ün-üö͡-m	ün-üö͡-m	et-i-h-er	ogonn'or
mp	huo͡k	ün-IAK-m	ün-IAK-m	et-I-s-Ar	ogonn'or
ge	no	crawl-FUT-1SG	crawl-FUT-1SG	say-EP-RECP/COLL-PRS.[3SG]	old.man.[NOM]
ps	ptcl	v	v	v	n
IST		0.giv-active-Q	0.giv-active-Q	quot-sp	giv-active
fe	"No, I will crawl, I will crawl", said the old man.				

The context is that a hunter (the old man) got injured, a polar fox is following him hoping that the old man will die. In the sentence before the polar fox said "Lie down.". Hence, the old man is given-active in the discourse.

2.10.3.10 Topic-comment-structure and Focus-background-structure (Top, Foc)

The Topic-comment tier (**Top**) and Focus-background tier (**Foc**) contain the annotation of information structure. The tag set and the principles of annotation were developed from the Leipzig Model of Information Structure [LM] (cf. Junghanns & Zybatow 2009). The LM works in the theoretical framework of the Minimalist Program (cf. Chomsky 1995) and was developed to describe the information structure of Slavic languages. However, it is flexible enough to adapt it to other languages and language families. The main idea of the LM is that "information structuring is a pragmatically – through the situation of the communication, the context – determined ordering principle through which

elements of the sentence get a certain communicative stress." (Junghanns & Zybatow 2009: 687). Within the LM there are two levels of information structure, on the one hand the topic-comment-structure and on the other hand the focus-background-structure (Junghanns & Zybatow 2009: 688). That means that topic and focus are not complementary in the clause, both of them being the salient component on their respective level. *Topic* is understood as an aboutness topic in the aristotelic sense, i.e. the part of the sentence what the predication is about, whereas *focus* is understood as the part of the sentence which is conceived and, thus, marked as important for the speaker (ibid.).

Topics are divided into external topics and internal topics, the former standing outside the syntactic structure of the clause (e.g. *That man – he stole my car.*) and the latter standing inside the syntactic structure of the clause (e.g. *My mother worked for the social services.*). Internal topics can be concrete (i.e. having a clearly identifiable referent) or abstract (i.e. situational, so-called frame-setting topics). A special case of topic is furthermore a contrastive topic (e.g. *My mother worked for the social services, but my father worked at TV.*). The tag set developed for topics is the following:

Table 12: Tags for annotating topics

Tag	**Comment**
External topics	
top.ext	external topic
Internal topics	
top.int.concr	concrete internal topic
top.int.concr.contr	concrete contrastive internal topic
top.int.abstr	abstract internal topic

As topical referents can be deleted, covert topics are tagged with <0.> at the predicate of the clause. Focus is divided into natural focus (a.k.a. informational focus) and special focus. Within natural foci it is distinguished between wide, intermediate and narrow focus: A wide focus contains the whole clause, an intermediate focus contains mostly the VP of the clause and a narrow focus contains a single constituent smaller than the VP. Special foci are contrastive foci (e.g. "Since when do you live in Berlin?" – "I live in Dresden now.") and verum foci (e.g. "Did you buy butter?" – "Yes, I did."). The tag set developed for foci is the following:

Table 13: Tags for annotating focus

Tag	**Comment**
Natural focus	
foc.wid	wide natural focus
foc.int	intermediate natural focus
foc.nar	narrow natural focus
Special focus	
foc.contr	contrastive focus
foc.ver	verum focus

As only topic and focus are salient features, whereas comment and background can be derived subtractively, only the former ones are tagged. All the cells belonging to the topic or the focus domain are merged here. The following charts show some examples of annotating information structure:

(21)

ref	AsKS_19XX_Amulet_nar.065 (001.064)		
tx	Hir	ürde:n	ispit.
mb	hir	ürde:-n	is-pit
mp	hir	ürde:-An	is-BIT
ge	mountain.[NOM]	get.higher-CVB.SEQ	go-PST2.[3SG]
Top	top.int.concr		
Foc		foc.int	
fe	The mountain got higher.		

(22)

ref	AsKS_19XX_Amulet_nar.001 (001.001)		
tx	Ihilletebit	l'it'eraturnaj	p'er'edač'ani.
mb	ihill-e-t-e-bit	l'it'eraturnaj	p'er'edač'a-nɨ
mp	ihilin-A-t-A-BIT	l'it'eraturnaj	p'er'edač'a-nI
ge	be.heard-EP-CAUS-PRS-1PL	literary	programme-ACC
Top	0.top.int.abstr		
Foc	foc.wid		
fe	We broadcast a literary programme.		

(23)

ref	AsKS_19XX_Amulet_nar.112 (001.111)				
tx	"Huo͡ok,	ünüö͡m,	ünüö͡m",	etiher	ogonn'or.
mb	huo͡ok	ün-üö͡-m	ün-üö͡-m	et-i-h-er	ogonn'or
mp	huo͡ok	ün-IAK-m	ün-IAK-m	et-I-s-Ar	ogonn'or
ge	no	crawl-FUT-1SG	crawl-FUT-1SG	say-EP-RECP/COLL-PRS.[3SG]	old.man.[NOM]
Top		0.top.int.concr	0.top.int.concr		
Foc	foc.ver	foc.contr	foc.contr	foc.int	
fe	"No, I will crawl, I will crawl", said the old man.				

2.10.3.11 Borrowing (BOR)

The Borrowing tier (**BOR**) contains the annotation of borrowed lexical items. Both the origin of the item in question and the type of borrowing is annotated. The tags are made up as follows: <LANGUAGE:type>. The annotation is implemented already in the FLEx lexicon and automatically exported to EXMARaLDA. For Dolgan there are Russian (RUS), Evenki (EV) and Nganasan (NGAN) borrowings. Older, mostly mongolic loanwords, that are common to both Sakha and Dolgan, are not tagged. For the type of borrowing the following tags are used (cf. also Arkhipov (fortch.)):

Table 14: Tags for annotating borrowings

Tag	**Comment**
:cult	cultural borrowing (most frequent; also used for borrowed names)
:core	core borrowing
:gram	grammatical device (e.g. conjunctions)
:mod	modal words
:disc	discourse markers

Most identified borrowings are lexical items, which in turn mostly belong to the class of cultural borrowings. Two important layers of borrowings can be named: 1. reindeer terminology borrowed from Evenki and 2. administrative, technological etc. terminology borrowed from Russian. Moreover, there are several grammatical devices, modal words and discourse markers borrowed from Russian, and also one frequent derivational suffix (-kA:N, forming diminutives) borrowed from Evenki. Since the latter is a bound morpheme and, thus, may appear together with another lexical borrowing, its gloss is additionally added in brackets, cf. example (25). The following charts show some examples of annotating borrowings and their types:

(24)

ref	AsKS_19XX_Amulet_nar.206 (001.203)			
tx	Oru͡o	ikki	ma:miti	halga:bit.
mb	Oru͡o	ikki	ma:mit-i	halga:-bit
mp	Oru͡o	ikki	ma:bit-nI	halga:-BIT
ge	Oru͡o.[NOM]	two	noose.for.catching.reindeer-ACC	combine-PST2.[3SG]
BOR			EV:cult	
fe	Oru͡o combined two nooses for catching reindeer.			

(25)

ref	ChGS_UoPP_20170724_SocCogDesc_conv.UoPP.099 (001.250)				
tx	Bu	ogoko:n	tugu	kördö,	ogo.
mb	bu	ogo-ko:n	tug-u	kör-d-ö	ogo
mp	bu	ogo-kA:N	tu͡ok-nI	kör-TI-tA	ogo
ge	this.[NOM]	child-DIM.[NOM]	what-ACC	see-PST1-3SG	child
BOR		EV:gram (DIM)			
fe	The little child has spotted something, the child.				

(26)

ref	AsKS_19XX_Amulet_nar.261 (001.257)				
tx	“U͡olbar	kuppun	bi͡eri͡ekpin	na:da”,	di:r.
mb	u͡ol-ba-r	kup-pu-n	bi͡er-i͡ek-pi-n	na:da	di:-r
mp	u͡ol-BA-r	kut-BI-n	bi͡er-IAK-BI-n	na:da	di͡e-Ar
ge	son-1SG-DAT/LOC	amulet-1SG-ACC	give-PTCP.FUT-1SG-ACC	need.to	say-PRS.[3SG]
BOR				RUS:mod	
fe	“I have to give my amulet to my son”, he thinks.				

2.10.3.12 Borrowing phonology and Borrowing morphology (BOR-Phon & BOR-Morph)

The tier **BOR-Phon** contains the annotation of phonological processes in borrowing. The tag set is the following:

Table 15: Annotation panel for phonological processes in borrowings

Tag	Comment
Deletions	
inCdel	initial consonant deletion
inVdel	initial vowel deletion (aphaeresis)
medCdel	medial consonant deletion
medVdel	medial vowel deletion (syncope)
finCdel	final consonant deletion
finVdel	final vowel deletion (apocope)
Insertions	
inVins	initial vowel insertion
medVins	medial vowel insertion
finVins	final vowel insertion
Substitutions	
Csub	consonant substitution
Vsub	vowel substitution
Other	
lenition	lenition (weakening)
fortition	fortition (strengthening)

The tier **BOR-Morph** contains the annotation of morphological processes in borrowing. The tags are made up as follows: <Strategy:Inflection>. The tag set is the following:

Table 16: Tags for annotating morphological processes in borrowings

Tag	Comment
Adaptation strategies	
dir:	direct insertion (i.e. insertion without morphological adaptation)
indir:	indirect insertion (i.e. insertion with morphological adaptation)
parad:	paradigm insertion (i.e. a paradigm borrowed)
Further inflection (in the matrix language)	
:bare	no inflection
:infl	further inflection

The following charts show some examples of annotating both borrowing phonology and borrowing morphology:

(27)

ref	MiXS_1967_SoldierInSecondWorldWar_nar.015 (001.015)		
tx	[…] kihi	gojobu:n	bu͡olbutun, […]
mb	kihi	gojobu:n	bu͡ol-but-u-n
mp	kihi	gojobu:n	bu͡ol-BIT-tI-n
ge	human.being.[NOM]	wound.[NOM]	be-PTCP.PST-3SG-ACC
BOR		EV:core	
BOR-Phon		fortition	
BOR-Morph		dir:bare	
fe	[…] that people were wounded, […]		

The Evenki original is *gojowu:n* (Stachowski 1993: 86), thus the approximant *w* is strengthened to the plosive *b*, therefore "fortition" is indicated in the BOR-Phon tier. As it is inserted without loanword morphology and there is no further inflection, there is the tag "dir:bare" in the BOR-Morph tier.

(28)

ref	MiXS_1967_SoldierInSecondWorldWar_nar.051 (001.051)			
tx	[…] n'em'ester	samal'ottara	kötön	kele-kele […]
mb	n'em'es-ter	samal'ot-tara	köt-ön	kel-e-kel-e
mp	n'em'ec-LAr	samal'ot-LArA	köt-An	kel-A-kel-A
ge	German-PL.[NOM]	airplane-3PL.[NOM]	fly-CVB.SEQ	come-CVB.SIM-come-CVB.SIM
BOR	RUS:cult	RUS:cult		
BOR-Phon	lenition			
BOR-Morph	dir:infl	dir:infl		
fe	[…] as the airplanes of the Germans were flying coming, […]			

Since the Russian original is *n'em'ec*, and the final affricate *c* is weakened to the sibilant *s*, the respective tag is "lenition" in BOR-Phon. As both borrowings are inserted without loanword morphology and are further inflected, the tags in BOR-Morph are "dir:infl".

2.10.3.13 Code switching (CS)

The Code switching tier (**CS**) contains the annotation of code-switching. Whereas borrowings treat single words, code switching (mostly) treats sequences of two or more words. Both language of the code-switch and type of the code switch are annotated, namely according to the scheme <LANGUAGE:type>. The language is mostly Russian (RUS), some instances of Evenki (EV) are also found. The tag set for the type of code-switch is the following:

Table 17: Tags for annotating code-switching

Tag	**Comment**
Sentence-external code-switching	
:ext	languages change at sentence (clause, utterance) borders
Sentence-internal code-switching	
:int.ins	languages change at phrase borders (e.g. a VP, NP, PP etc. is inserted)
:int.alt	the point of change is somewhere at an arbitrary point in the sentence

The following chart shows an example of annotating code-switching:

(29)

ref	AkNN_KuNS_2002_LifeHandicraft_conv.031 (001.038)					
tx	D'i͡e,	kvart'i:ru	dal'i	vs'o	tako:je,	d'e.
mb	d'i͡e					d'e
mp	d'i͡e					d'e
ge	house.[NOM]					well
CS		RUS:int.ins				
fe	A house, an apartment they gave and stuff like that.					

2.10.3.14 Free translation (fe, fg, fr)

The free translation tiers (**fe**, **fg** and **fr**) give free translations of the utterance in question into English, German and Russian. The translations are free, i.e. they do not necessarily reflect morphological and syntactical properties of the Dolgan original. The translations follow the common guidelines presented in Arkhipov (forthc.).

The following chart shows an example:

(30)

ref	AsKS_19XX_Amulet_nar.001 (001.001)		
tx	Ihilletebit	l'it'eraturnaj	p'er'edač'ani.
mb	ihill-e-t-e-bit	l'it'eraturnaj	p'er'edač'a-nɨ
mp	ihilin-A-t-A-BIT	l'it'eraturnaj	p'er'edač'a-nI
ge	be.heard-EP-CAUS-PRS-1PL	literary	programme-ACC
fe	We broadcast a literary programme.		
fg	Wir übertragen ein Literaurprogramm.		
fr	Мы передаем литературную передачу.		

2.10.3.15 Literal Russian translation (ltr)

The Literal Russian translation tier (**ltr**) contains the original Russian translation of the sentence in question. In case of the texts from [FD 2000] this means the published translation. In case of the texts made available by the TDNT and transcribed by native speakers, the transcribers were instructed to provide a literal (sometimes word-to-word) translation, reflecting the underlying Dolgan structure. The following chart shows an example of how literal and free translation may differ:

(31)

ref	AsKS_19XX_Amulet_nar.139 (001.138)						
tx	Ogonn'or	hiŋil	erdegine	emi͡e	karakta:k	bagaj	ete.
mb	ogonn'or	hiŋil	er-deg-ine	emi͡e	karak-ta:k	bagaj	e-t-e
mp	ogonn'or	hiŋil	er-TAK-InA	emi͡e	karak-LA:K	bagajɨ	e-TI-tA
ge	old.man.[NOM]	young	be-TEMP-3SG	also	eye-PROPR.[NOM]	very	be-PST1-3SG
fe	When the old man was young, he could see very well, too.						
fr	Старик, когда был молодой, тоже был глазастый.						
ltr	Старик молодой когда был тоже глазастый был.						

2.10.3.16 Notes (nt)

The Notes tier (**nt**) eventually contains notes, which clarify the content of the sentence or point at something peculiar in the sentence. The notes begin with the indication of who made the note (abbreviation as listed in 2.6.6.3, in square brackets, followed by a colon). The following chart shows an example of it:

(32)

ref	KiMN_1975_ReindeerHerding_nar.009 (001.009)		
tx	[…] ügüs	pr'ič'ine:le:k	bu͡olar.
mb	ügüs	pr'ič'ine:-le:k	bu͡ol-ar
mp	ügüs	pr'ič'ine:-LA:K	bu͡ol-Ar
ge	many	reason-PROPR.[NOM]	be-PRS.[3SG]
fe	[As I was caring about it, when a reindeer was born], there were many reasons.		
fg	[Als ich mich früher gekümmert habe, wenn ein Rentier geboren wurde], gab es viele Gründe.		
fr	[Когда раньше я ухаживал, когда олень рождался], много причины бывало.		
nt	[DCh]: Last part of the sentence not clear, even for native speakers: There were reasons for what?		

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Appendix 1. Morpheme glossing labels (ge, gg, gr)

Label	Meaning
1	first person
2	second person
3	third person
ABL	ablative case
ACC	accusative case
ADJZ	adjectivizer
ADVZ	adverbializer
AFFIRM	affirmative (particle)
AG	agent noun
APPR	apprehensive mood
APRX	approximative (numerals)
ASSIS	assistive
CAP	capacitative mood
CAUS	causative
COLL	collective
COM	comitative case
COMP	comparative case
COND	conditional mood
CVB.ANT	anterior converb
CVB.COND	conditional converb
CVB.PURP	converb of purpose
CVB.SEQ	sequential converb
CVB.SIM	simultaneous converb
DAT/LOC	dative-locative case
DIM	diminutive
DISTR	distributive (numerals)
DRV	(unknown) derivational suffix
DU	dual
EMOT	emotive
EMPH	emphatic (particle)
EP	epenthetic vowel
EVID	evidential (particle)
EXCL	exclamative (particle)
FREQ	frequentative
FUT	future tense
FUT2	future tense 2
GEN	genitive case
HAB	habitual
IMP	imperative mood
INCH	inchoative

Label	Meaning
INDEF	indefinite
INFER	inferential
INSTR	instrumental
INTJ	interjection
INTNS	intensive
ITER	iterative
LIM	limitative
MED	medial
MLTP	multiplicative (numerals)
MOD	modal (particle)
MOM	momentaneous
MULT	multiplicative (actionality)
NARR	narrative (particle)
NEC	necessitative mood
NEG	negation
NEG.CVB	negative converb
NEG.CVB.SIM	negative simultaneous converb
NEG.EX	existential negation
NEG.PTCP	negative participle
NEG.PTCP.PST	negative past participle
NMNZ	nominalizer
NOM	nominative
ONOM	onomatopoetic
ORD	ordinal numeral
PART	partitive
PASS	passive
PERF	perfective
PHIL	“philative” (expressing affection or inclination), …phile
PL	plural
POSS	possessive
POT	potential mood
PROPR	proprietive
PRS	present tense
PST1	past tense 1
PST2	past tense 2
PTCP.COND	conditional participle
PTCP.FUT	future participle
PTCP.HAB	habitual participle
PTCP.PRS	present participle
PTCP.PST	past participle
Q	interrogative (particle)

Label	Meaning
RECP/COLL	reciprocal-collective
REFL	reflexive
SG	singular
SIM	simulative
TEMP	temporal mood
TRZ	transitivizer
VBZ	verbalizer

Appendix 2. Dolgan morphemes in alphabetical order

Marker	Abbreviation	Function
-^0	NOM	nominative case
-^0	3SG	third person singular
-^0	IMP.2SG	imperative mood, second person singular
-A	EP	epenthetic vowel
-A	PRS	present tense
	CVB.SIM	simultaneous converb
-A:	VBZ	verbalizer
-A:ччI	HAB	habitual mood
	PTCP.HAB	habitual participle
-A:jA	APPR	apprehensive mood
	POT	potential mood
-A:ktA:	FREQ	frequentative
	EMOT	emotive
-A:r	FUT	future tense
-A:rAj	APPR.3SG	apprehensive mood, third person singular
	POT.3SG	potential mood, third person singular
-A:rI	CVB.PURP	converb of purpose
-A:T	CVB.ANT	anterior converb
-AlA:	FREQ	frequentative
-An	CVB.SEQ	sequential converb
-Ar	PRS	present tense
	PTCP.PRS	present participle
-AttA:	MULT	multiplicative
-BA	1SG	possessive suffix of first person singular (in dative-locative of possessive declension)
-BA	NEG	negation
-BAkkA	NEG.CVB.SIM	negative simultaneous converb
-BAktA:	INCH	inchoative
-BAT	NEG	negation
	NEG.PTCP	negative participle
-BAtAK	PST2.NEG	negation of past tense 2
	NEG.PTCP.PST	negative past participle
-BI	1SG	possessive suffix of first person singular (in possessive declension)
-BIччA	CVB.COND	conditional converb
-BIn	1SG	first person singular (predicative row)
-BInA	1SG	first person singular (temporal row)
-BIt	1PL	possessive suffix of first person plural (in nominative)
		first person plural (predicative row)
		first person plural (possessive row)

Marker	Abbreviation	Function
-BIT	PST2	past tense 2
	PTCP.PST	past participle
-BItI	1PL	possessive suffix of first person plural (in possessive declension)
-BItInA	1PL	first person plural (temporal row)
-čA:n	DIM	diminutive
-čAk	ADVZ	adverbializer
-ččA	APRX	approximative numeral
-ččI	ADVZ	adverbializer
-čI	INCH	inchoative
-ČIt	AG	agent noun
-GA	DAT/LOC	dative-locative case
-GA	2SG	possessive suffix of second person singular (in dative-locative of possessive declension)
-GAr	DAT/LOC	dative-locative case (in possessive declension)
-GI	2SG	possessive suffix of second person singular (in possessive declension)
-GI	ADJZ	adjectivizer
-GIn	2SG	second person singular (predicative row)
-GInA	2SG	second person singular (temporal row)
-GIt	2PL	possessive suffix of second person plural (in nominative)
		second person plural (predicative row)
		second person plural (possessive row)
-GItI	2PL	possessive suffix of second person plural (in possessive declension)
-GItInA	2PL	second person plural (temporal row)
-I	EP	epenthetic vowel
-I	ADVZ	adverbializer
-I:	ADJZ	adjectivizer
-I:	NMNZ	nominalizer
-I:hI	CAP	capacitative mood
-I:m	IMP.1SG	imperative mood, first person singular
-IAgIŋ	IMP.1PL.IN	imperative mood, first person plural
-IAjAk	LIM	limitative numeral
-IAk	IMP.1DU	imperative mood, first person dual
-IAK	FUT	future tense
	PTCP.FUT	future participle
-IAktI	FUT2	future tense 2
-IAlA:	FREQ	frequentative
-IAn	COLL	collective numeral
-IAr	CAUS	causative
-Ij	Q	interrogative particle

Marker	Abbreviation	Function
-ijek	DRV	(unknown) derivational suffix
-In	ADVZ	adverbializer
-In	3SG	third person singular (at some converbs)
-InA	3SG	third person singular (temporal row)
-InnAr	CAUS	causative
-Is	ORD	ordinal numeral
-ItAlA:	FREQ	frequentative
-j	VBZ	verbalizer
-k	NMNZ	nominalizer
	ADJZ	adjectivizer
-k	DRV	(unknown) derivational suffix
-kA	DIM	diminutive
	INTNS	intensive/intensifier
-kA:N	DIM	diminutive
	INTNS	intensive/intensifier
	LIM	limitative
-kAj	ADJZ	adjectivizer
-ke:če:n	INTNS	intensive/intensifier
-kin	INTNS	intensive/intensifier
-ku:	EMPH	emphatic
-LA:	VBZ	verbalizer[18]
-LA:gI	ADJZ	adjectivizer
-LA:K	PROPR	proprietive
	NEC	necessitative mood
-LAN	REFL/MED	reflexive/medial
	VBZ	verbalizer
-LAr	PL	plural
-LAr	3PL	third person plural (predicative row)
-LArA	3PL	possessive suffix of third person plural (nominative)
		third person plural (possessive row)
-LArI	3PL	possessive suffix of third person plural (in possessive declension)
-LI:	SIM	simulative
	DISTR	distributive numeral
-LI:N	COM	comitative case
-LIk	NMNZ	nominalizer
	ADVZ	adverbializer
-LIN	PASS/REFL	passive/reflexive
-m	1SG	possessive suffix of first person singular (nominative)
		first person singular (possessive row)

[18] -LA: is also used to integrate borrowed verbs from Russian into Dolgan.

Marker	Abbreviation	Function
-m	NEG	negation
-mInA	NEG.CVB	negative converb
-msAk	ADJZ	adjectivizer
	PHIL	“philative” (expressing affection or inclination), …phile
-msIj	MOM	momentaneous
	DRV	(unknown) derivational suffix
-n	ACC	accusative case (in possessive declension)
-n	GEN	genitive case (in possessive declension)
-n	REFL	reflexive
	MED	medial
	PERF	perfective
-n	VBZ	verbalizer
-nA	PART	partitive case (in possessive declension)
-nAn	INSTR	instrumental case
-nI	ACC	accusative case
-ŋ	2SG	possessive suffix of second person singular (nominative)
		second person singular (possessive row)
-ŋ	IMP.2PL	imperative mood, second person plural
-ŋnA:	ITER	iterative
	VBZ	verbalizer
-r	DAT/LOC	dative-locative case (in possessive declension)
-r	CAUS	causative
	INTNS	intensive/intensifier
-s	RECP/COLL	reciprocal-collective
	MED	medial
	ASSIS	assistive
-s	NMNZ	nominalizer
-skA	NMNZ	nominalizer
-t	CAUS	causative
	INTNS	intensive/intensifier
	MED	medial
	PASS	passive
	TRZ	transitivizer
-tA	3SG	possessive suffix of third person singular (nominative)
		third person singular (possessive row)
	POSS	possessive
-TA	PART	partitive case
-TA	MLTP	multiplicative numeral
-TA:	ITER	iterative
-TA:gAr	COMP	comparative case

Marker	Abbreviation	Function
-tAj	INTNS	intensive/intensifier
-TAK	PTCP.COND	conditional participle
	TEMP	temporal mood
	INFER	inferential
-TAr	CAUS	causative
	PASS	passive
-TAR	COND	conditional mood
-TArInA	3PL	third person plural (temporal row)
-tI	3SG	possessive suffix of third person singular (possessive declension)
-TI	PST1	past tense 1
-TIj	INCH	inchoative
-TIn	IMP.3SG	imperative mood, third person singular
-TInnAr	IMP.3PL	imperative mood, third person plural
-ttAn	ABL	ablative case