Quick Rich Transcription (QRTR) Specification for Arabic Broadcast Data

(XTrans-Format Version)

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Linguistic Data Consortium

http://www.ldc.upenn.edu/GALE/Transcription

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1 Introduction and Overview

The goal of quick rich transcription (QRTR) for broadcast news and broadcast conversation is to produce a verbatim, time-aligned transcript with minimal but useful markup. QRTR also identifies some salient structural features of the broadcast and provides speaker identification.

The elements of a quick rich transcript include:

- verbatim transcription
- time-aligned section boundaries, speaker turns and sentences (segmentation)
- section and sentence type identification
- speaker identification
- standard treatment of common spoken phenomena

Transcription begins with audio segmentation. This involves "timestamping" structural boundaries including sections (i.e., story transitions), speaker turns and sentence units (SUs). Speakers are identified by name where possible, or by a unique identifier, and other speaker traits like sex are noted. Once audio has been virtually segmented into smaller units, annotators transcribe the content of each segment. Special conventions are used to flag certain speech phenomena like disfluencies and mispronounced words. Quality control checks verify the completeness and accuracy of segmentation and transcription.

QRTR differs from Quick Transcription (QTR) in that each sentence unit is timestamped and labeled for its type. QRTR differs from careful transcription (CTR) in the amount of detail contained in the transcript markup, the number of features identified, the degree of accuracy and completeness of the transcript, the amount of time taken to complete the file, and the number of quality checks that are performed on the finished product.

Please see LDC's transcription website for links to guidelines for the various transcription tasks: http://www.ldc.upenn.edu/Projects/Transcription

2 Data

These guidelines pertain to data in the following genres:

- *Broadcast News (BN)* consisting of "talking head"-style news broadcasts from radio and/or television networks.
- *Broadcast Conversation (BC)* consisting of talk shows, interviews, roundtable discussions and other interactive-style broadcasts from radio and/or television networks.

Data is divided into files, which typically correspond to a recording of one broadcast from a single program. Files are typically 30 to 60 minutes in duration, though they may be of any length. Files come from a range of radio, television, satellite and web broadcast sources from around the world. Each show is predesignated as BN or BC based on its characteristic content. Note however that BN shows can sometimes contain stories that are conversational, while BC shows can include hard news reports.

3 Segmentation Task

3.1 Introduction

Transcription begins with segmentation. During the segmentation task, annotators virtually chop an audio recording into smaller units that correspond to certain features of the broadcast, for instance sentence units or speaker turns. Each segment must be timestamped – that is, time-aligned with the audio – to identify where the segment starts and ends. In most cases in broadcast audio, the end of one segment is also the beginning of the next. Segments are also classified by type and subtype. We identify three kinds of segments in the QRTR task: Sections, Turns, and Sentence Units. These are arranged hierarchically (sections contain turns, turns contain sentences).

It is suggested that annotators begin segmentation by identifying the most finegrained segment type, sentence units (SUs). SU boundaries frequently occur at natural boundaries in the audio (pauses, breaths, speaker turns), which makes segmentation easier. This is not always the case, especially for complex or atypical SUs, and annotators will need to fine-tune some SU boundaries once they have completed transcription. As segments are created, XTrans will prompt the annotator to supply SpeakerID information, and the annotator will also indicate section (story and commercial) boundaries as encounter them. The sections that follow provide detailed information about each step of the process.

Annotators should note that segmentation in XTrans can be done with the keyboard only, with the mouse only, or with a combination of both. After you've become familiar with basic XTrans functionality, you will find that using only the keyboard is both faster and more intuitive than using the mouse.

3.2 Timestamping the Audio

Timestamps are required for all segments. In XTrans, annotators create a timestamped segment simply by marking the appropriate region of audio in the waveform display, then inserting the selected segment¹. Timestamps are designated in seconds, rounded to the nearest thousandth of a second. Note that while XTrans does not show start/end timestamps within the transcript display, the waveform display includes a color-coded horizontal bar representing each segment, along with its start time, end time and duration.

Because broadcast speech recordings use a single audio channel, segments occur one right after the other, in direct succession and typically without

¹ Detailed instructions for using the XTrans toolkit are available in "Using XTrans for Broadcast Transcription: A User Manual" distributed with the XTrans package and available from LDC's transcription website: http://www.ldc.upenn.edu/Projects/Transcription

intervening periods of unsegmented audio (silence). Small gaps in the succession of segments should indicate an untranscribed event, like a commercial, music, sound effects or background noise². All speech and other material to be transcribed must be segmented.³

Timestamps should always be placed in between words, not inside of them or at the very edges of words where speech sounds could be truncated. Good places to insert timestamps are during pauses, breaths or other non-speech events, which typically occur at sentence unit (SU) boundaries. Finally, it is critical that the time and the audio event are properly aligned, so that the words transcribed within each segment match the speech associated with that segment.

3.3 What to Segment

All broadcast speech must be segmented and classified into sections (news reports, conversational segments or non-news). News reports and conversational segments must also be segmented into SUs, with speakerIDs added. Non-news sections like commercials should **not** be segmented into smaller units or labeled for speakerID, and they should not be transcribed.

Very brief (under 0.5 seconds) periods of silence, music, background noise or other types of non-speech that occur while someone is speaking should simply be included within that SU segment, or split between two adjoining speaker SU segments. No other treatment is necessary. Lengthy segments of non-speech (like sound effects) that interrupt a speaker's turn, or that come in between speaker turns, should be separated out and left unsegmented. Note that annotators should make an effort to leave SU segments intact; that is, avoid splitting a single SU into multiple segments even when it includes a lengthy pause.

3.4 Segmenting Overlapping and Simultaneous Speech

In broadcast audio, overlapping speech from two or more speakers is a relatively frequent occurrence. Although broadcast files contain a single audio channel, within XTrans each unique speaker in a file is assigned a separate *virtual* channel. Transcribers can simply create overlapping segments two or more distinct speakers using the normal XTrans functionality. Overlapping segments are represented in the waveform display as overlapping horizontal bars, as shown in the image below.

² Note that using the mouse for segmentation makes it easier to leave unintended small gaps in consecutive segments of continuous speech. Using the keyboard shortcuts for segmentation avoids this problem.

³ The LAG (Listen All Gaps) feature in XTrans allows annotators to review all unsegmented material in a file.

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4 Sentence Units (SU)

Segmentation begins with identification of sentence unit boundaries. A sentence unit (SU) is a natural grouping of words produced by a single speaker. SUs have semantic cohesion – that is, they can have some inherent meaning when taken in isolation; and they have syntactic cohesion – that is, they have some grammatical structure⁴. In written language, sentences are usually designated by punctuation like periods or question marks. When creating SU boundaries for spoken language, our goal is to identify a semantically and syntactically cohesive group of words that constitute a reasonable sentence-like unit. Sentence units are the most basic kind of segment in the QRTR task. Each SU should be contained within its own segment. Segments should not contain multiple SUs, and single SUs should not be divided across multiple segments.

We distinguish three types of SUs: statements, questions and incomplete sentences. After identifying the boundaries of an SU and creating a corresponding segment, annotators can use XTrans to assign the segment type. In general, the SU segment types are consistent with standard end-of-sentence punctuation used during transcription, as follows:

Punctuation	SU Type	Symbol
period	end-of-sentence markup for Statement SUs	
question mark	end-of-sentence markup for Question SUs	?
double dash	end-of-sentence markup for Incomplete SUs	

Annotators will note that standard punctuation typically includes commas as well. For purposes of the QRTR task, we do not identify an SU (or sub-SU) unit that corresponds to a comma. Commas may be added into transcripts for human readability, but it should be understood that the existence of a comma does not imply the existence of a sentence unit. See Section 7.1.2 for additional discussion of punctuation in QRTR transcripts.

The sections that follow provide language-specific rules for identifying SUs of each type.

4.1.1 Statement SUs

Statements are declarative sentences or fragments, and are usually punctuated by a period or exclamation point. For instance,

⁴ Note however that incomplete SUs may contain incomplete semantic and/or syntactic content.

```
كما من جهة أخرى نرى الجوانب الإيجابية الموجوده في الوضع العربي.
On the other hand we do see the positive aspects of Arab society.
```

```
موضوع اليوم عن الطلاق.
Today's topic is divorce.
```

. يمكن بدها تعمل ماجستير أو تخلص دكتور اه Maybe she wants to get a master's or complete a doctorate.

لكن هي خطوة بالانجاه الصحيح A step in the right direction.

هي خطوة مهمة An important step.

4.1.1.1 Backchannel SUs

A backchannel is a word or phrase that provides feedback to the dominant speaker, indicating that the non-dominant speaker is still paying attention to the conversation. In QRTR, backchannels are treated as statement SUs. When a speaker chains together several backchannels in succession, annotators tag them as a single statement SU. For instance,



Long statements with multiple verbs are very common in Arabic. In these cases, annotators should use their judgment about whether the verb change warrants a new statement SU. See **Section 4.1.4** for additional guidelines on determining SU boundaries.

4.1.2 Question SUs

The question label should be used for a complete sentence that functions as an interrogative. The expected end-of-sentence punctuation for a question is a question mark.

```
دكتورة أمين هل الأطفال مثلا أكثر عرضة لوقع الصدمة من الكبار؟
Dr. Amin, are children more susceptible to trauma (after the tsunami) than adults?
```

A tag question is a phrase added to the end of an utterance that invites the listener to give feedback. Tag questions usually do not stand alone as a question, but rather form a complete question with the previous utterance:

9 صار زمان بتشتغل هونيك ولا لأ You've been working there for years or not?

وله علاج مش هيك ؟ It has a cure, doesn't it?

المشكلة العربية الإسرائيلية أتعقدت، مش ده رأيك برضه؟ The Israeli Arab problem is highly complicated, isn't this your opinion also?

Rhetorical questions should also receive a Question SU label:

```
ألا يقولون ليس هناك سلام ردي، ولا حرب جيدة ؟
Isn't it said that peace is always acceptable and there is no such thing as a good war ?
```

The question SU label should only be used when the utterance is clearly asking a question or functioning as a tag or rhetorical question. If you are unsure whether the SU is functioning as a statement or a question, you should label it as a statement.

4.1.3 Incomplete SUs

When an utterance does not constitute a grammatically complete sentence **and** does not express a complete thought, it is labeled as an incomplete Sentence. In standard writing, this kind of incomplete SU might be followed by double dashes (-) or ellipses $(...)^5$.

Incomplete SUs frequently occur in two situations. When a speaker interrupts him/herself and then restructures the utterance and continues speaking on the same topic, an incomplete SU exists. In other cases, the speaker may trail off at the end of his/her turn and abandons the utterance completely, without restructuring it or continuing along the same lines. For instance:

```
انا قلت لل...
الموضوع ده انا مش موافق عليه ابدا .
I said to --
I am not in agreement with this subject at all.
```

الطريق الوحيد هو بضمان وحدة العراقيين بجميع الطوائف و و.--The only way is ensuring Iragi unity with all its sects and and--

The other frequent case of incomplete SU occurs when one speaker's turn is cut short by an interruption from the other speaker, as in the following:

⁵ QRTR punctuation guidelines require annotators to use the double dash -- at the ends of incomplete SUs.

Speaker1: يمكن أو لادهم يمكن أو لاد أو لادهم يمكن او لاد او لاد ـ . Speaker2: دكتورة أمين دعني أستوقفك لنتكلم مع ضيفتنا من القاهرة .

A: Their children, their grandchildren their great great grand --B: Dr Amin, let me interrupt you to introduce our guest from Cairo.

Be careful not to confuse incomplete SUs with sentence fragments that express a complete thought (for instance a response to a question that is expressed as a phrase rather than a complete sentence.) Sentence fragments that express a complete thought and show no signs of being caused by an interruption or by the speaker simply trailing off, should be labeled as statement SUs.

4.1.4 Recognizing SU Boundaries

It can sometimes be difficult to determine where a sentence unit boundary exists and when to place two clauses within the same SU. Annotators should rely primarily on the meaning conveyed by the utterance and apply SU breaks in accordance with the rules described in these guidelines. However, annotators may sometimes rely on prosodic features like sentence intonation or pauses to determine where to place an SU boundary. In practice, SU boundaries tend to occur at the ends of fragments, simple sentences and complex sentences.

Complex sentence are very common in spoken Arabic and can be tricky to segment into SUs. In general, annotators should lean toward creating a single SU for complex, multi-part sentences. This is particularly true when two parts (clauses) of the sentence depend on one another for the completion of an idea, for instance:

مش بس مناوث مياه البحر بس كمان منخلي المجاري تصب رأسا بالبحر. Not only do we pollute the water but we also let the sewers empty straight into the sea.

على مستوى المشاعر جزء كبير من الاشخاص يصاب بقلق شديد لدرجة أنه لا يستطيع النوم ليلا ان لم يأخد منوم أو مهدىء للأعصاب.

As far as emotional reactions some people are unable to sleep without a sleeping pill or a sedative.

انفجرت قنابل بنفق قرب الفندق ودمرت السيارات الواقفة بالجوار. A bomb exploded in a tunnel near the hotel and many cars in the area were damaged.

تابعت كما تابع غيري ظهور خلاف بين السعودية والبحرين و هما عضوان في مجلس التعاون الخليجي. I followed as did many others the appearance of a division between Saudi and Bahrain and both members of the Gulf Cooperation Council.

In Arabic we frequently see a subject introduced in the first clause of a narrative and then dropped repeatedly from subsequent clauses. In such cases, annotators treat each clause as a sentence, as the following examples show:

دعت الجمعية الطبية الأطباء لمؤتمر طبي. The Medical society invited the physicians to a conference. وناقشت وضوعات طبية ساخنة. And discussed hot medical topics . وفي النهاية دعت الأطباء الي العشاء. And by the end invited the physicians for a dinner.

قام الرئيس جورج بوش بزيارة الى فرنسا. President Bush went on a visit to France. وتقابل مع الرئيس الفرنسى لبحث المشكلة العراقية. And he met the French president to discuss the Iraq situation.

ذهبت الي عملي اليوم. I went to my work today. الجو كان صحو. The weather was clear. والشمس مشرقة . And it was sunny.

5 Identifying Section Boundaries

The QRTR task also calls for identification of section boundaries. A section is a topically contiguous segment of the broadcast. Sections begin at SU boundaries. At the beginning of each new section, annotators simply insert the appropriate section label. Consecutive sections of the same type should receive separate section boundary labels, except in the case of consecutive commercials and other untranscribed segments which should be grouped together as a single (untranscribed) section. All audio in a speech file must be assigned to a section.

We recognize three section types:

• **Reports** include typical "talking head" news broadcast, with an anchor reading the news. This may also include broadcasts from reporters in the field. News reports may be of any length, as long as they constitute a complete, cohesive news report on a particular topic. Note that single news stories may discuss more than one related topic. When reports of similar content are adjacent to one another in a broadcast, it is often difficult to tell where one story ends and the next begins. Annotators should rely on audio cues (speaker changes, music, pauses) to inform their judgments. When in doubt, **do not** create a new section boundary.

• **Conversations** include highly interactive segments of a broadcast, including roundtable discussions, interviews, call-in segments, debates and the like. Some conversation sections are quite long and can contain multiple topics. Annotators should create a new section boundary only at natural breaks in the flow of conversation, for instance, when there is a major shift in topic, or when a new panelist joins a roundtable discussion. If in doubt, the annotator should avoid creating a new conversation boundary.

It may sometimes be difficult to tell the difference between a report and a conversational segment. When in doubt, annotators should use **report**.

• **Non-news** text includes segments like commercials, station identifications, public service announcements, promotions for upcoming shows and long musical

interludes. <u>Note that non-news sections are not segmented, transcribed or</u> <u>further annotated in any way</u> (including speaker ID or SU segmentation). Once a non-news section has been identified and labeled, it should be ignored for the rest of the transcription task. If multiple non-news sections follow one another within a transcript, they should be grouped together as a single section. This is different from multiple consecutive news or conversational reports, which should be separated into multiple sections.

6 Speaker Identification

In addition to identifying SUs and section boundaries, annotators also label the identity of speakers within a broadcast. Speaker IDs are required with each SU segment⁶. Each speaker label has three elements: speaker type (required), non-native status (optional) and speaker "name" if available.

6.1 Speaker Type

All speakers must be assigned a speaker type. There are four speaker types as follows:

- Female used for adult females
- Male used for adult males
- Child used for children of either sex
- Other used for speakers in unison, non-human (computer) voices, altered voices, unknown speaker sex, etc.

6.2 Names and Identifiers

All speakers must be identified by name. When name is not known, annotators use a **unique** identifier for each speaker.

When names are known, they should be written out in full. For names with multiple spellings or transliterations, the most common variant should be used. If in common practice the name contains a middle initial or appositive like "Jr.", these should be included and spelled out in full. All names must be written in English using the most common transliteration. Capitalization should follow standard conventions.

The spelling of speaker IDs must be consistent within a broadcast file, and wherever feasible across different broadcast files as well. It is also important that the spelling of names within a transcript match the spelling of the name in within the speaker ID label. For instance, if the transcript uses the transliteration "Osama bin Laden", then the speaker ID should also use "Osama", not "Usama".

When a speaker is not identified by name within a recording, the speaker should be labeled with a unique numerical identifier, e.g. speaker14. Each anonymous speaker is assigned a unique number that should be used for every instance of that speaker throughout the broadcast. Anonymous speaker IDs cannot be re-

⁶ The XTrans toolkit requires annotators to provide speaker ID for each SU annotation.

used for different speakers in the same file, regardless of gender or speaker type⁷.

6.3 Native and Non-native Speakers

In addition to labeling speaker type and name, annotators also indicate when a speaker is non-native; that is, when they use a language variety other than the target, or when they speak the target language with a discernable foreign accent. Targets for the current task are

- Arabic Modern Standard Arabic (MSA)
- Chinese Mainland Mandarin Chinese
- English American English

Speakers using other varieties/dialects of these languages, or speaking these languages with a heavy foreign language/dialect accent (for instance, Cantonese-accented Mandarin, or British English) should be marked as non-native.

In the case of Arabic, nearly all speakers will be native speakers of some regional variety of Arabic (e.g., Egyptian Arabic or Gulf Arabic) rather than native speakers of MSA. A native speaker of any Arabic dialect who is talking in MSA should be considered "native" for purposes of speakerID labeling. Do not mark native Arabic speakers as "non-native" when they are speaking MSA simply because you can detect a regional accent. Only speakers who are clearly **not** native speakers of Arabic, or who speak Arabic with a discernable **foreign language** accent, should be considered non-native.

See Section 7.4 for additional discussion of Arabic dialects in broadcast transcripts.

7 Transcription

Quick-rich transcription requires annotators to produce a verbatim transcript of all speech within a file and to add minimal markup to capture salient features of the speech. Standard writing conventions, including orthography, spelling and punctuation, are used for ease of comprehension and readability. Transcripts must be produced in UTF-8 (Unicode) encoding. Transcripts should be spell-checked for common misspellings or typographical errors before they are considered complete.

⁷ Note that the LRS (Listen Random Segment) and LAS (Listen All Segments) functions in XTrans are helpful for verifying speakerID assignment.

7.1 Orthography and Spelling

7.1.1 Spelling

Transcribers should use standard MSA orthography, word segmentation and word spelling. All files must be checked for typos and misspellings after transcription is complete. When in doubt about the spelling of a word or name, annotators should consult a standard reference, like an online or paper dictionary, world atlas or news website⁸.

7.1.2 Punctuation

Annotators should include standard punctuation for ease of transcription and reading. Acceptable punctuation is limited to the following:

Туре	Usage	Symbol
period	end-of-sentence markup for Statement SUs	·
question mark	end-of-sentence markup for Question SUs	?
double dash	end-of-sentence markup for Incomplete SUs	-
comma	sentence-internal, used to aid readability	,

Transcripts should not contain quotation marks, exclamation marks, colons, semicolons, single (stand-alone) dashes, or ellipses in transcribing. Punctuation should be written as it normally appears in standard writing, with no additional spaces around the punctuation marks.

7.1.3 Numbers

All numerals should be written out as complete words instead of number characters. They should be written as spoken (using the <foreign> or <non-MSA> tag as needed; see section 7.4.1 for more details).

written	pronounced	number character
احدى عشر	iHda A\$ar	11
<english> one </english>	one	1
<non-msa> احدعشر <non-msa></non-msa></non-msa>	iHdA\$r	11
<non-msa> احدعش <non-msa></non-msa></non-msa>	\$ iHdA	11

7.1.4 Proper Nouns

No special markup is required for proper nouns. Note however that spelling of names should be consistent within the transcript, and should match the spelling of the name in within the assigned speaker ID. For instance, if the speaker ID uses the transliteration "Osama bin Laden" the transcript should also use "Osama" when that name is spoken, not "Usama" or some other form.

7.1.5 Contractions

Contractions are extremely rare in Arabic. Annotators should limit their use to cases where they are actually produced by the speaker. In those rare cases,

⁸ The latest version XTrans also includes an Arabic spell-checker.

annotators must take care to transcribe exactly what the speaker says and what they hear using standard orthography.

? شقتله for اش قلت له: 'What did you say to him' or, perhaps, نصف for نصف 'half' and نص 'daughter'

7.1.6 Acronyms

For acronyms pronounced as a single word, write them as they are pronounced:

NASA	ناسا
AIDS	إيدز
UNESCO	يونيسكو
UNICEF	يونيسف

7.1.7 Spoken Letters

Abbreviations that are normally written as a single word, but are pronounced as a sequence of individual letters, should be written in Arabic as they are pronounced, with a space between the letters. Note that the Arabic letters for English letters 'j' and 'n' should not be written as τ and υ but as full words, equal to τ .

English	Pronounced	Transcribed
IBM	ay by am	ای بی ام
UN	u an	يو إن
CIA	sy ay ayh	سی ای ایه

7.2 Disfluent Speech

Regions of disfluent speech are particularly difficult to transcribe. Speakers may stumble over their words, repeat themselves, utter partial words, restart phrases or sentences, and use hesitation sounds. For purposes of QRTR, annotators should not spend too much time trying to precisely capture difficult sections of disfluent speech, but should make their best effort to transcribe what they hear after listening to the segment once or twice, then move on.

7.2.1 Filled Pauses and Hesitation Sounds

Filled pauses are non-word sounds that speakers employ to indicate hesitation or to maintain control of a conversation while thinking of what to say next. The spelling of filled pauses is not altered to reflect how the speaker pronounces the word. Instead, there is a restricted set of filled pauses for each language, with established spelling conventions. For Arabic, filled pauses are limited to the following:

gloss	pronounced	written as
ah	h	أه
eh	<yh< td=""><td>إيه</td></yh<>	إيه
um	>m	أم
ooh	$>_{\rm WW}$	أوو
hm	mm	مم

7.2.2 Partial Words

When a speaker breaks off in the middle of the word, annotators transcribe as much of the word as can be made out. A single dash - is used to indicate point at which word was broken off.

ما زالت مس- مستمرة It is continu- continuing.

7.2.3 Mispronounced Words

A plus symbol + is used for obviously mispronounced words (**not** regional or nonstandard dialect pronunciation). Annotators should transcribe using the standard spelling and should not try to represent the pronunciation. Just transcribe the word using the standard spelling, adding the plus sign + to signal that the word is pronounced incorrectly.

Keep in mind that this symbol should only be used for obviously mispronounced words. Dialect pronunciations or other common variants of words should not be marked as mispronunciations.

7.2.4 Idiosyncratic Words

Occasionally a speaker will make up a new word on the spot. These are not the same as slang words, but rather are words that are unique to the speaker in that conversation. If annotators encounter an idiosyncratic word, they should transcribe it to the best of their ability and mark it with an asterisk *. For instance,

```
Do you dress like a *schlump yet?
Why she said *drr I don't know
إنت الية بلم
```

7.3 Speaker Errors and Non-standard Usage

Annotators should not correct grammatical errors, e.g. "I seen him" for "I saw him". The words must be transcribed as spoken. The same goes for non-standard usage or mis-used words, e.g.

اش قد أسعار الكلب الحراسة حيث انتصبت أقفاصا للكلاب و القطط والطيور

Annotators should transcribe exactly *what is spoken*, not what they expect to hear or what they consider "correct" speech.

7.4 Foreign Languages and Dialects

7.4.1 Foreign Languages

Portions of speech in any language other than the target language are annotated using the <language> text </language> convention to indicate the language and to transcribe the words that are spoken in that language if annotators know the language, for instance:

<English> I'm sorry. </English>

If the annotator does not know the name of the language or what is being said, they should use the tag <foreign> instead of the language name.

Note that borrowings that have been arabicized are not marked as foreign language, but should be transcribed in Arabic. Usually these words have Arabic morphological markers. For instance:

I bought a computer he watched TV She went to the hairdresser اشتريت كمبيوتر . شاف تلفزيون . ذهبت عند الكوافور .

7.4.2 Dialects

Annotators will frequently encounter non-MSA dialect especially in the broadcast conversation programs. Non-MSA dialects include the following:

- o Gulf Arabic: Saudi, Kuwaiti, Iraqi
- Levantine: Syrian, Jordanian, Lebanese, Palestinian
- Maghrebi: Moroccan, Tunisian, Algerian
- Nile: Egyptian, Sudanese

It can be very difficult to distinguish when someone is speaking MSA and when they are speaking in a colloquial dialect, and speakers may move back and forth rapidly within a single statement. Nevertheless, because the target language for this transcription task is MSA, it is helpful to indicate when a speaker is obviously speaking in a colloquial dialect. Therefore, annotators should do their best to identify portions of speech when someone is obviously speaking in an Arabic dialect rather than MSA.

Regions of non-MSA speech should be identified using a special marker:

<non-MSA> text </non-MSA>

The words should be transcribed using standard Arabic orthographic conventions. If the conversation switches back and forth between MSA and non-MSA dialect, mark just the non-MSA portions using the convention described above, and leave the MSA portions unmarked. Note also that SU segmentation is unaffected by the presence of non-MSA speech. A single SU segment may contain all MSA, all non-MSA, or a mix of both.

The following is an example of Iraqi dialect:

<non-MSA> يعني أكو بها مبالغة يعني بالاحداث ياللي بتصير بالداخل. <non-MSA> (non-MSA> يعني أكو بها مبالغة يعني بالاحداث ياللي بتصير بالداخل. <non-MSA> (non-MSA> يعني بدليل انه الوزير بنفسه ديصرح ديقول ل- أكو يعني أجانب جايين وطلع الجوازات يعني قدامك عالشاشة. <non-MSA> (non-MSA> يعني أكو قتلى موجودين يعني حتى جثث موجودة (()) يعني هل من المعقول أكو مساجد يكون داخلها جثث.<non-MSA> (non-MSA> (non-MSA> (non-MSA>) يعني أكو قتلى موجودين يعني حتى جثث موجودة (()) يعني هل من المعقول أكو مساجد يكون داخلها جثث.<non-MSA>

Here is another example of an SU segment with mixture of MSA and Non-MSA:

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انا لست متفقا مع الدكتور <non-MSA>لاني شايف انو</non-MSA/>على خطأ

Annotators may also encounter MSA spoken with an accent. This should be transcribed using standard Arabic orthography, without any special markup. Accented speech should not be labeled as a mispronounced word. Annotators should not transcribe any accent features, for example, g for j, g for q' etc, but rather use the standard orthography. For example:

Speaker says in Egyptian: dagAg, spelling should be kept: دجاج Speaker says: ygul in Iraqi, spelling should be يقول

It is most important in transcription that annotators only transcribe what they hear, instead of what they think is correct. Annotators should not attempt to normalize dialectal features. For example,

Speaker says الي even in a MSA context; trasncriber should not turn it into الذي Speaker says الذي ; transcriber should not turn it into

Another thing that annotators should keep in mind is that they should not let their own dialectal background influence their transcription. Transcribe what you hear, not what you expect to hear.

7.5 Background and Speaker Noise

Transcribers are not required to specially label background noise or sound effects. Note however the convention for indicating long periods of non-speech within or outside an SU segment (Section 3.3).

Speaker-produced noise is identified with one of the following four tags:



7.6 Hard-to-understand Regions

Sometimes an audio file will contain a section of speech that is difficult or impossible to understand. In these cases, annotators should use double parentheses (()) to mark the region of difficulty. It may be possible to take a guess about the speaker's words. In these cases, annotators transcribe what they think they hear and surround the area of uncertain transcription with double parentheses:

<non-MSA> يعني أكو قتلى موجودين يعني حتى جثث موجودة (()) يعني هل من المعقول أكو مساجد يكون داخلها جثث <non-MSA>

If an annotator is truly mystified and can't at all make out what the speaker is saying, s/he uses empty double parentheses to surround the untranscribed region. For example:

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```
Speaker1: (())
```

Do not skip the region.

7.7 Final Pointers

- 1. Transcribe what you hear, not what you think is correct.
- 2. Do not add iwords if they are not in the audio, and do not delete words that are spoken, even if they are ungrammatical.
- 3. Do not try to normalize dialectal words.
- 4. Do not attempt to transcribe accent features. Use standard orthography.
- 5. Do not skip words that are hard to understand. Use (()).

Appendix 1: Recommended Strategy

There are many different ways to interact with XTrans to create a time-aligned transcript. The following is a synopsis of LDC's recommended strategy for creating broadcast transcripts with XTrans. Note that most of these functions are keyboard rather than mouse-based commands. For quick transcription, it is strongly recommended that transcribers choose keyboard over mouse-based functions as much as possible. This takes a little getting used to but you will find it much faster and easier to use the keyboard only rather than switching between keyboard and mouse (and it's easier on your wrists!). Consult the XTrans user manual for additional information.



⁹ Some transcribers prefer to fully segment the file the go back and transcribe it; while others prefer to transcribe as they segment.