

# Using the listings package for Conversation Analysis (CA)

Jürgen Spitzmüller

April 28, 2015

## 1 Introduction

Unfortunately, there is no  $\LaTeX$  package available for writing transcripts in conversation analysis. Transcripts usually use some kind of parallel notation in order to represent overlaps in speech ('turns'). Within  $\text{LyX}$ , this can be somewhat achieved by using tables or the tabbing environment (for the latter, see <http://wiki.lyx.org/LyX/LinguistLyX#ca>). This document introduces another approach: the use of the listings package [1].

The listings package (interface in  $\text{LyX}$ : Insert▷Program Listing) is a package for displaying program listings (computer source code). However, it can also be (mis)used for CA transcription, although there are severe limitations:

- The listings package cannot deal yet with unicode. This severely limits the use of multiple scripts. The following approach should work if the script used is the same (or a subset) than the surrounding text.
  - ⇒ If you need multiple scripts, you can try the listingsutf8 package [2], which however requires that you write your listings in an external editor and include it via Insert▷File▷Child Document▷Program Listing.
  - ⇒ You can also manually extend the range of characters known to listings. See for instance <http://tex.stackexchange.com/questions/25391/the-listings-package-and-utf-8>.
- The display of the tabbing indentation in  $\text{LyX}$ 's work area is not always adequate, so you need to check the output.

## 2 Preparation

In order to use listings for CA, we need to do several modifications.

- We chose (paradoxically) “no language” in the listings settings (since “language” here refers to computer languages)
- In Document▷Settings...▷Listings<sup>1</sup>, we enter the following:

```
numbers=left
basicstyle={\small\ttfamily}
numberstyle={\small\ttfamily}
breaklines=true
tabsize=4
escapechar={|}
xleftmargin=4em
breakautoindent=false
breakatwhitespace=true
breakindent=33pt
```

You probably will have to adjust some of these settings for your own needs. Please refer to the listings manual [1] for details about the options.

- In Document▷Settings...▷Preamble, we define a command that lets us mark individual lines of the transcript by an inwards pointing arrow. Since we use the margin note for this, we need to tell L<sup>A</sup>T<sub>E</sub>X first to swap the margin (we want the arrow to be in the left margin):

```
% Margin par to the left
\reversemarginpar
% \markline command which puts an arrow
% next to the line number
\newcommand*\markline{%
  \marginpar{\begin{picture}(0,0)\put(77,0){%
    $\mathtt{\rightarrow}$}\end{picture}}%
}%
}
```

- Since this is common style in the transcription system we use here, we furthermore need to modify the line numbers in order to add leading zeros to lines < 10. This is done by the following preamble code:

---

<sup>1</sup>This could also be done at each listing individually, via Edit▷Listings Settings... while the cursor is inside the listing, but it is more convenient to set it once and for all (individual settings can then just be changed in the latter dialog).

```

% Leading zeros to numbers below 10
\AtBeginDocument{%
  \renewcommand*\the\lstnumber{%
    \makebox[3em][r]{\ifnum\value{\lstnumber}<10
      0\fi\the\value{\lstnumber}}%
  }%
}

```

- For convenience, we also define some macros for the transcription symbols we use (especially for those which need  $\LaTeX$  macros anyway). Since we use the GAT convention [3] here, the definitions look like this:

```

% Some macros (for GAT notation)
% minor pitch changes
\newcommand\pitchrise{\ensuremath{\mathtt{\uparrow}}}
\newcommand\pitchfall{\ensuremath{\mathtt{\downarrow}}}
% major pitch changes
\newcommand\Pitchrise{\ensuremath{\mathtt{\uparrow\uparrow}}}
\newcommand\Pitchfall{\ensuremath{\mathtt{\downarrow\downarrow}}}
% pitch does not change at turn end
\newcommand\pitchconst{-\kern-0.4em-\kern-0.4em-}
% accent pitch movement
\newcommand\accfall{\'{}{}}
\newcommand\accrise{\'{}{}}
\newcommand\accsame{\raisebox{.7ex}{\pitchconst}}
\newcommand\accfallrise{\v{}}
% breathing in/out (three degrees, respectively)
\newcommand\breathin{\textdegree h}
\newcommand\Breathin{\textdegree hh}
\newcommand\BREATHIN{\textdegree hhh}
\newcommand\breathout{h\textdegree}
\newcommand\Breathout{hh\textdegree}
\newcommand\BREATHOUT{hhh\textdegree}

```

Of course, this is not a complete set, but it should suffice to demonstrate how you could add more macros or alter them for a different transcription system. By the way, you can easily switch between basic and fine transcript by simply changing those definition to empty (e.g., `\newcommand\pitchrise{}`).

### 3 Example transcripts

Here are some example transcripts. They are quoted from [3] and consequently use the GAT transcription conventions.

Note that  $\LaTeX$  commands need to be embraced in  $|\dots|$ , as done in example (1) for the self-defined `\markline` command.

#### Beispiel (1): ((fiktives Gespräch, 1:04-2:05 Sek.))<sup>2</sup>

```
01 A: hier fängt der transkripttext an
02 B: ja genau
03   (---)
04 A: wenn du mir ins wort fä[llst]
→ 05 B: [ich ] fall dir ja
06     gar nicht ins wort
07 A: doch
08     (.)
09     hast du wohl getan
10     du hast (.) mich grade unterbrochen
11 B: ja
12     tut mir leid
```

#### Beispiel (2): Der widerliche Kerl<sup>3</sup>

```
01 S1: ja; (.) die ↑VIERziger genera`ti0n so;=
02     =das_s: ↑!WA:HN!sinnig viele die sich da ham
03     [↑SCHEI]den
04 S2: [ ja; ]
05     lasse[n.=
06     [ ^hm,
07     =<<dim> oder ↯schEiden lassen ↑Überhaupt.>
08 S1: <<pp> heute noch— >
09     ((atmet 2.1 Sek. aus))
10     <<p> s_is der ↑UMbruch.>
11 S2: n besonders ↑GÜtes beispiel das warn mal unsere
12     ↑NACHbarn.
13     (---)
14     ähm (---)
15     ↑DREIßig jahre ver`hEiratet, °hh
16     das letzte kind (.) `Endlich aus_m ´HAUS,
17     zum stu´DIERN, (-)
18     ´WEGgegangen,=´ne, °h
19     nach ber´LIN, °h
20     und (.) die `Ältere tochter is ´AUCH in berlin
21     gewesen? °hhh
22     und (.) der `´KE::RL
```

---

<sup>2</sup>Source: [3, 364]

<sup>3</sup>Source: [3, 396f.]

21 <<t> das war aber ein pene>↑`TRANter:  
↑`!W:I!derling.=also °hhh  
22 der hat (.) äh sein ↑`GARTen wie (.) ↑`!PIK!  
↑`AS (-) ge`PFLEGT,=´ne,  
23 ↑↑`!KEIN! `BLÄTT´chen,=  
24 =und ´NICHTS,=  
25 =`Englischer ´RAsen, °hh  
26 un:d: bei <<all> ↑↑`!JE!der ge`lEgen´heit hat er  
die poli↑`ZEI ge`rUfen,>  
27 <<all> und sich mit den `NACHbarn  
ange[´legt,=´ne, ]>  
(1.2)  
28 S1: [ <<pp>phhh hohoho ]  
29 S2: un `wEnn da: `Einmal: `jEmand zum `Abschied  
ge↑↑`HUPT ´hat,  
30 da `wAr der in <<all> `NULL komma nix> `drAußen;  
31 und hat da `RUMgeschrien;=  
32 =ich hol die poli↑↑`ZEI: und [so- ]  
33 S1: [ <<p> das ] ↑`GIBS  
doch wohl nich.>  
34 S2: ja;=↑`V:OLLkommen `Widerlich.=´ne, °hh  
35 u:n:d (-) dann `hAtte er do son (.) son  
↑↑`KLEInen ↑↑`BA:RT  
hier,=´ne, (-)  
36 <<all> und ham wir immer gesagt> `HIT[ler;=´ne,]  
37 S1: [ `HITler; ]  
38 S1: ↑`h[m, ]  
39 S2: [ ↑`hm, ]  
40 S1: [ ((lacht verstohlen, ca. 1.2 Sek. lang)) ]  
41 S2: [ ((lacht verstohlen, ca. 1.2 Sek. lang)) ]  
42 S2: ja und `dAnn `PLÖTZlich (-) is seine `FRAU  
abgehaun;=´ne,=  
43 =von ↑`HEUT auf `MORgen. °hhh  
44 `WEG;=  
45 =nach ber`LIN;=  
46 =zu den ´KINDern, (.)  
47 und `dA: (.) n `nEues ↑↑`LEben  
<<all> praktisch angefangen ->=  
48 =nach ↑`DREIßig `jAhren.=´ne,  
49 S1: ↑↑`hm,  
50 S2: und ´ER al´LEIne, (---)  
51 `könnte das ´HAUS nich mehr (.) ´hAlten,  
52 musste das ver↑`!KAU!fen ´glaub ich, °hhh  
53 <<all> dass er das ver↑`KAUFT hat;> (.)  
54 <<all> ↑`GLAUB ich ´wohl,> °hh  
55 und is <<len> ↑`SEI:T´de:m,>  
56 <<len> to`TA:L `zEr`FALLen.>=  
57 =<<all> irgendwie so richtig> ↑↑`FÖRMlich `zEr:  
`FALLen.=´ne, °hhh

58 der hats über ↑`HAUPT nich: (.) vk (.)  
 59 von al↑`LEIne <<all> wär er `nIe wieder auf e  
 `bEine gekommen;=  
 60 =´ne,> °hh  
 61 ´jEtzt wohnt er <<all> nämlich mit seiner>  
 ↑`SCHW:ESter zusa[mmen. ]  
 62 S1: [hehehe]  
 63 S1: he [he ]  
 64 S2: [und] die `LAUfen: (.) ↑`RUM wie n ↑`URaltes  
 `Ehe[paar.]=´ne,  
 65 S1: [he he]  
 66 S1: he ho [ ho ]  
 67 S2: [↑`OUH] `mAnn. (.) heh  
 68 S1: °h und aber a was aus der `FRAU geworden is  
 `wEißt du nich.=´ne,  
 69 S2: `NEE:;  
 70 nich ge↑`NAU;  
 71 aber die is nach ber↑`LIN gegang[en; ]  
 72 S1: [´hm,]  
 73 S2: und da hat die ihre ↑`KINder und–  
 74 S1: ´hm,  
 75 S2: ↑`GANZ neues ↑`LEben wahrscheinli[ch; ]=´ne,  
 76 S1: [´hm,]  
 77 (1.6)  
 78 S1: <<pp> tja;>  
 79 (2.6)

## References

- [1] Carsten Heinz/Brooks Moses/Jobst Homann. 2014. *The Listings Package*. URL: <ftp://mirrors.ctan.org/tex-archive/macros/latex/contrib/listings/listings.pdf>.
- [2] Heiko Oberdiek. 2011. *The listingsutf8 Package*. URL: <http://mirrors.ctan.org/macros/latex/contrib/oberdiek/listingsutf8.pdf>.
- [3] Margret Selting et al. 2009. Gesprächsanalytisches Transkriptionssystem 2 (GAT 2). In *Gesprächsforschung – Online-Zeitschrift zur verbalen Interaktion* 10, 353–402. URL: <http://www.gespraechsforschung-ozs.de/heft2009/px-gat2.pdf>.