HQSYN16 - Task #4247

Task # 3676 (New): RA3a - Context definition and penalisation matrix

Expert-based context penalization matrix

21.09.2017 08:05 - Matoušek Jindřich

Status:	Postponed	**Start date:**	21.09.2017
Priority:	Normal	**Due date:**	10.07.2018
Assignee:	Tihelka Dan	**% Done:**	100%
Category:		**Estimated time:**	0.00 hour
Target version:	RA3: Phonetically justified parameters for speech synthesis		

Description

Revise and propose expert-based context penalization matrix.

History

#1 - 22.09.2017 21:32 - Skarnitzl Radek

- Status changed from New to Assigned

#2 - 19.06.2018 18:31 - Skarnitzl Radek

- Status changed from Assigned to Resolved

- % Done changed from 0 to 100

After careful analysis and consideration, we came to the conclusion that a more detailed context-based penalization system (i.e., one going beyond nasalization and labialization contexts) is not realistic. We therefore propose only minor changes to the current system.

1. It is not clear why T (voiceless palatal plosive [c]) is not included in the nasalization matrix. We recommend that it is included.

2. Also for the nasalization matrix, we recommend that the following restriction - when examining diphone [*][o,O,u,U,y,i,I,e,E,a,A], disable the use of its l-context according to the following table - is only retained for obstruents (i.e., that it is dropped from the non-nasal sonorants [j, l, r]).

#3 - 03.07.2018 10:56 - Tihelka Dan

- File penalties.txt added

- Status changed from Resolved to Assigned

I am adding the list of penalties penalties.txt to be used during the experiment. It is quite large, since it is auto-generated from the test script.

But to avoid wrong conclusions, could you please look at it (briefly, just pick the most problematic items) and confirm that the penalties are ok?

The values mean:

- 10000 - disable. It is such a huge cost that this unit should never be selected (if there are other more appropriate variants)
- 10 - penalty. Another unit should be preferred, if possible, but the unit can be used e.g. in case when a concatenation cost to other units is too high
- 0 - no penalty

The lines in form *have/want-[unit]: u/a-[d*] -> 10.0* means: *penalise the use of unit with left context [u] when [a] is required for **any** diphone with left phone [d]*
The lines in form *+want/have: [*A]+C/J -> 1000000.0* means: *disable the use of unit with right context [ň] when [č] is required for **any** diphone with right phone [á]*

Note:
I am not sure if there are typos context penalty matrices:

- *diphone [*][o,O,u,U,y,i,I,e,E,a,A], disable the use of its l-context ...* - should it be: *disable the use of its **r-context** ...*?

The penalties.txt uses *left* and *right* contexts. I will re-generate the penalties table if there should only be *left* context in both cases.

#4 - 04.07.2018 13:14 - Tihelka Dan

- Due date changed from 31.12.2017 to 10.07.2018

#5 - 17.01.2019 16:02 - Matoušek Jindřich

- Status changed from Assigned to Feedback

- Assignee changed from Skarnitzl Radek to Tihelka Dan

#6 - 20.09.2021 21:48 - Tihelka Dan

- Status changed from Feedback to Postponed

Outdated...

Files

penalties.txt	691 KB	03.07.2018	Tihelka Dan