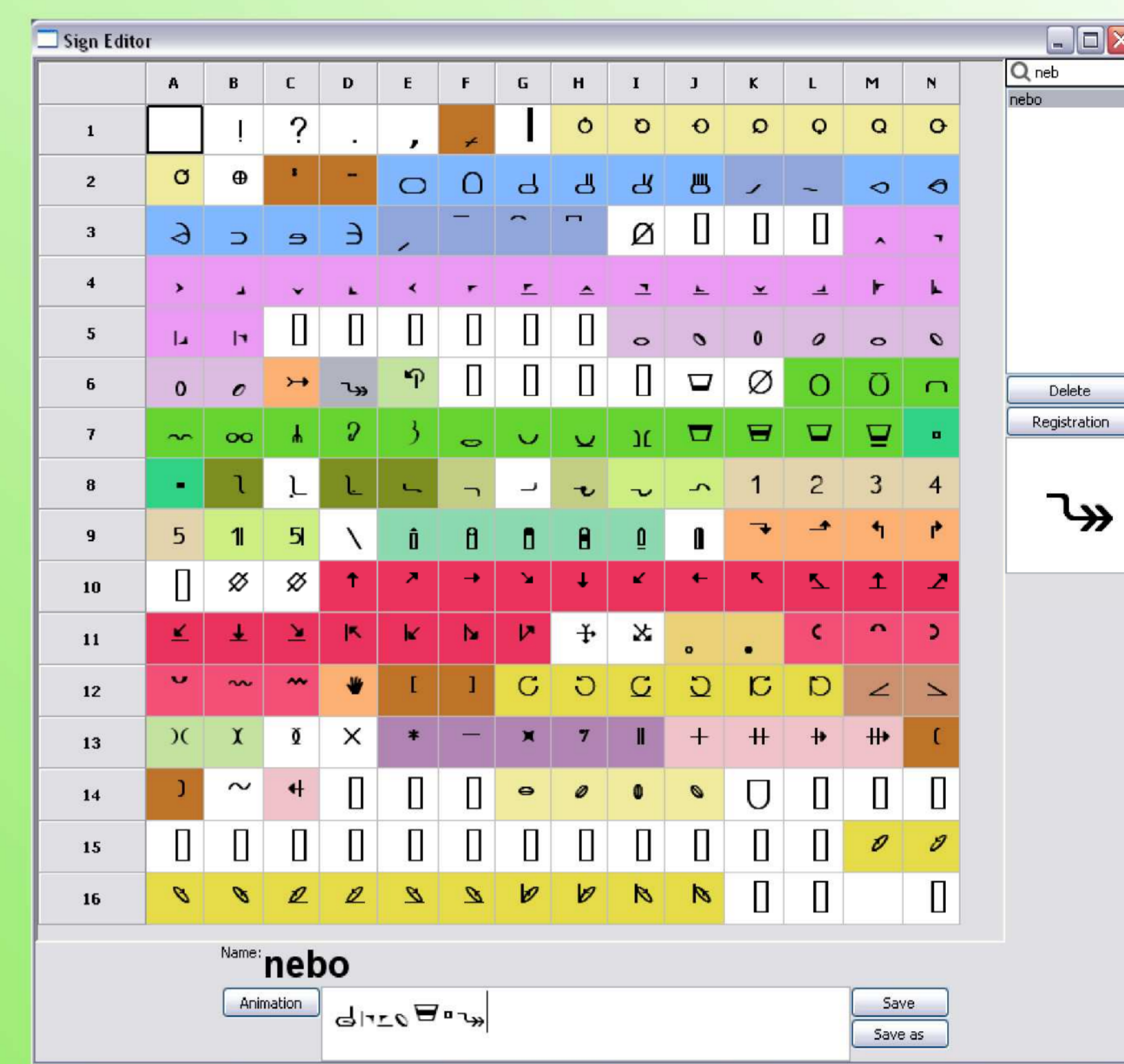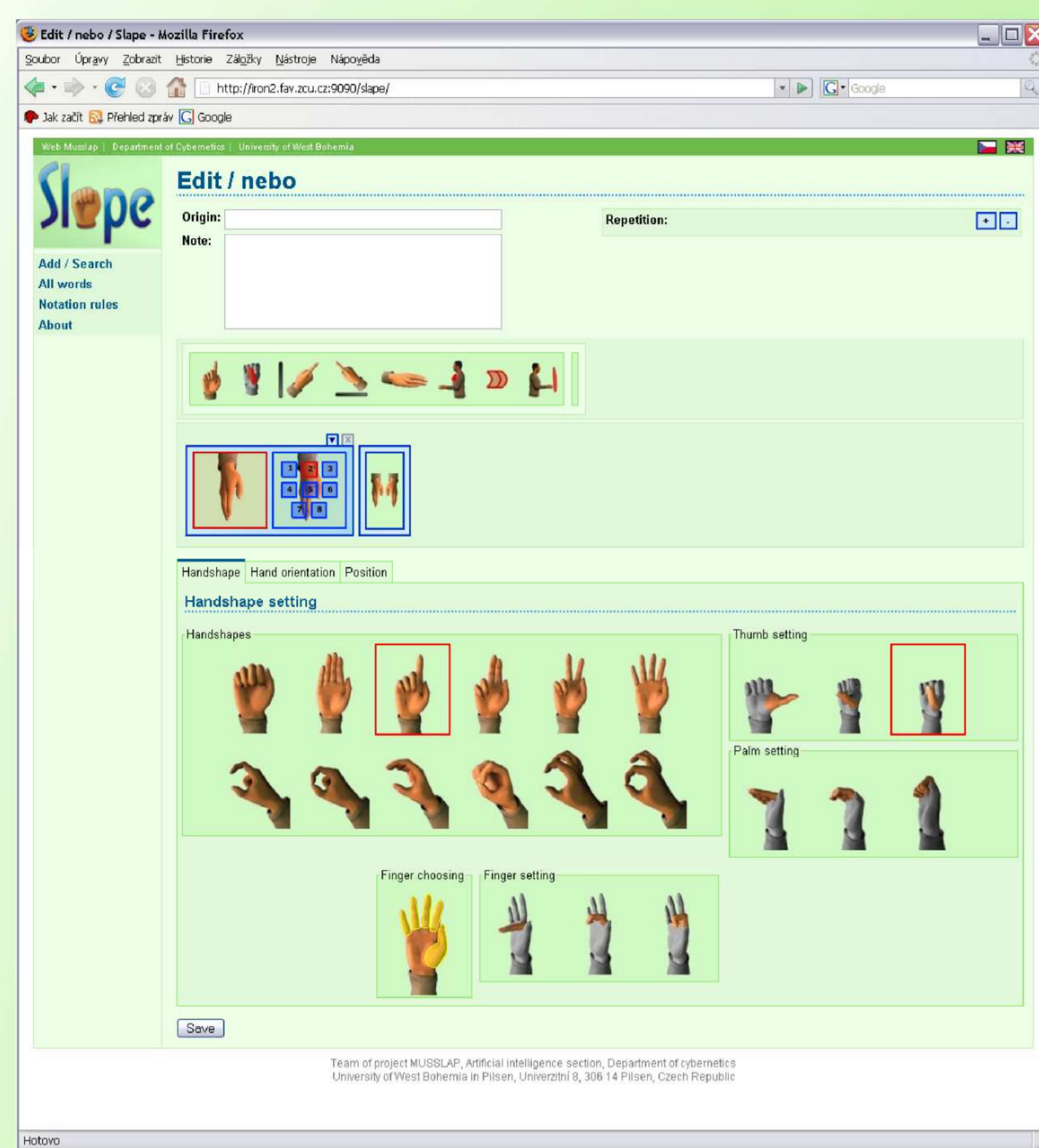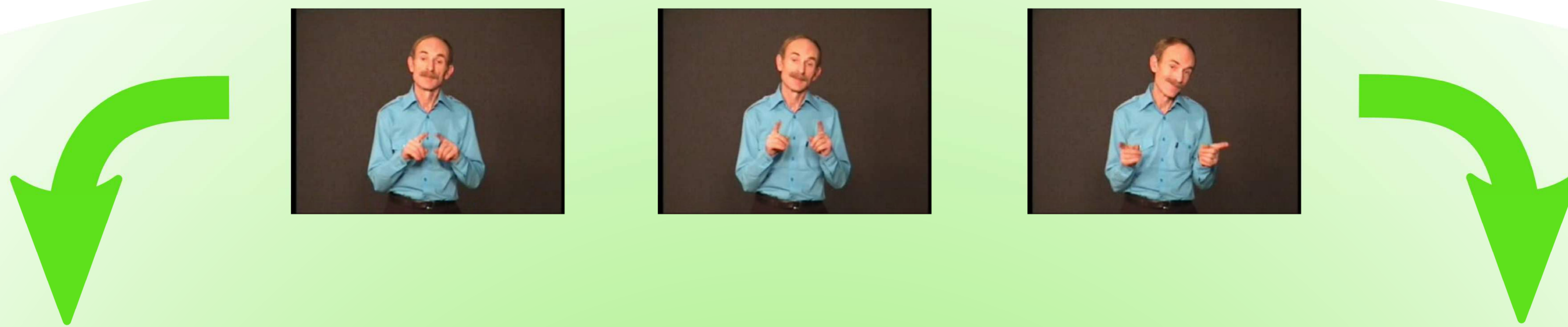# Interactive HamNoSys Notation Editor for Signed Speech Annotation

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Lexicon Creation

We have created the domain-specific lexicon for our synthesis system from railway station domain. The signs which need to be notate were collected by the inspection of the Czech to Signed Czech (CSC) parallel corpus and translations of train announcements. The CSC corpus contains 1109 dialogs from the telephone communication between a customer and an operator in a train timetable information center.

We have began the trial annotation process with six annotators to test the convenience of the SignEditor and the feedback animation. We have divided the annotation process to two steps. In the first step, four annotators who are not familiar with CSE were employed to insert the signs in the direct editor. The annotators use the video dictionaries of CSE as a source for the sign notation. In the second step, two remaining annotators (inspectors, familiar with CSE) were employed to correct the entered signs. The inspector use the SignEditor to replay signs and put comments about the correctness of the rendered animations.

The lexicon currently contains approximately 330 signs. By the inspection of the lexicon, we can observe that all signs include some variant of the starting point configuration. It is interesting that the most frequent symbols in the starting point configuration are the hand shape symbol described open hand and the location symbol for thorax. The most frequent sequences of symbols in the movement block are these for the relative change of hand shape and the finger orientation or absolute displacement of the wrist position. More than 55 % of all signs in the lexicon contain these sequences. The majority of this sequences is anotated in combination with another simultaneously performed movements. The 54 % of all signs are notated with the symbols for straight movements which form the path of writs. The symbols of circular movemnets were chosen for 7 % of all signs only. The symbols for the movement repetation are aproximatelly used for 30 % of all signs.

The annotators have had problems with notation of very small movements. The modification symbols for small, normal and large movements seems not to be sufficient. Furthermore, they have had also problems with location symbol for thorax. It seems that the current annotation variant is not enough in this case. There could be more possibilities how to annotate more precise this location. These experiences partially agrees with comments by inspectors who check signs in the lexicon.