The most important factor through which human beings can form their relationships and connections is using different methods such as speaking, writing and sign language. The point that deaf or semi-deaf people are ignored in communities is because of their disability in forming intimate relationships, and also the lack of common training according to what is needed in the society. The text to sign language translation systems have been created to resolve communication problems among hearing and deaf persons. Due to unstructured Persian language as well as the problems of Persian sign language, using translators’ systems of other countries is not practicable. The present study seeks to design a system that receives Persian text as an input and changes it to Persian sign language after all the necessary natural language processing is done. In doing this matter, several challenges are seen on our way: a) The number of Persian sign language words which are few compared to the words in Persian language and b) The ambiguity and pun normally used in Persian language. So, similar systems’ architecture could not be applied. Therefore, a new architecture is proposed that uses the relation between the removal pun modules and input text invert module to the deaf world by using designed ontology. Using this architecture, the efficiency of the Persian text to Persian sign language translator system has improved to 95% and increased the accuracy of the translator system by tripling.

The sign language interpreter system is designed to communicate with other people in the deaf. In addition, the language translator system can also be used to teach sign language. In this paper, with a new architecture, the challenges have been resolved to a satisfactory level. In the new architecture, two modules for detecting and correcting sentences and turning sentences into the deaf world have been used. Both modules are designed and used by the ontology. According to the results of the evaluation system, the translator’s language of reference using the new architecture is 95%.