Translation memories are becoming more and more popular with professional translators nowadays, especially in fields of software localization and translation of technical and official documents. Although commercial systems, which employ memory translation, provide some limited capabilities for automatic checking of translations, these are mostly of simple search-and-replace type. And none of these systems provide reasonable means of applying Czech morphology while checking. Professional translators could benefit from an automatic tool, which would provide more advanced rule-based checking capabilities, taking Czech and even English morphology into the process. Checking not only for correct use of terminology, but also for illicit translations and use of forbidden terms would be useful. This thesis investigates types of mistakes translators tend to make. Review of existing solutions for automatic translation checking for different languages is provided. An application is then suggested and developed, which attempts to search for some of the most frequent mistakes made in translations into Czech language, taking morphology into account while searching.