

# STYLUS - Outline of Functions and Features

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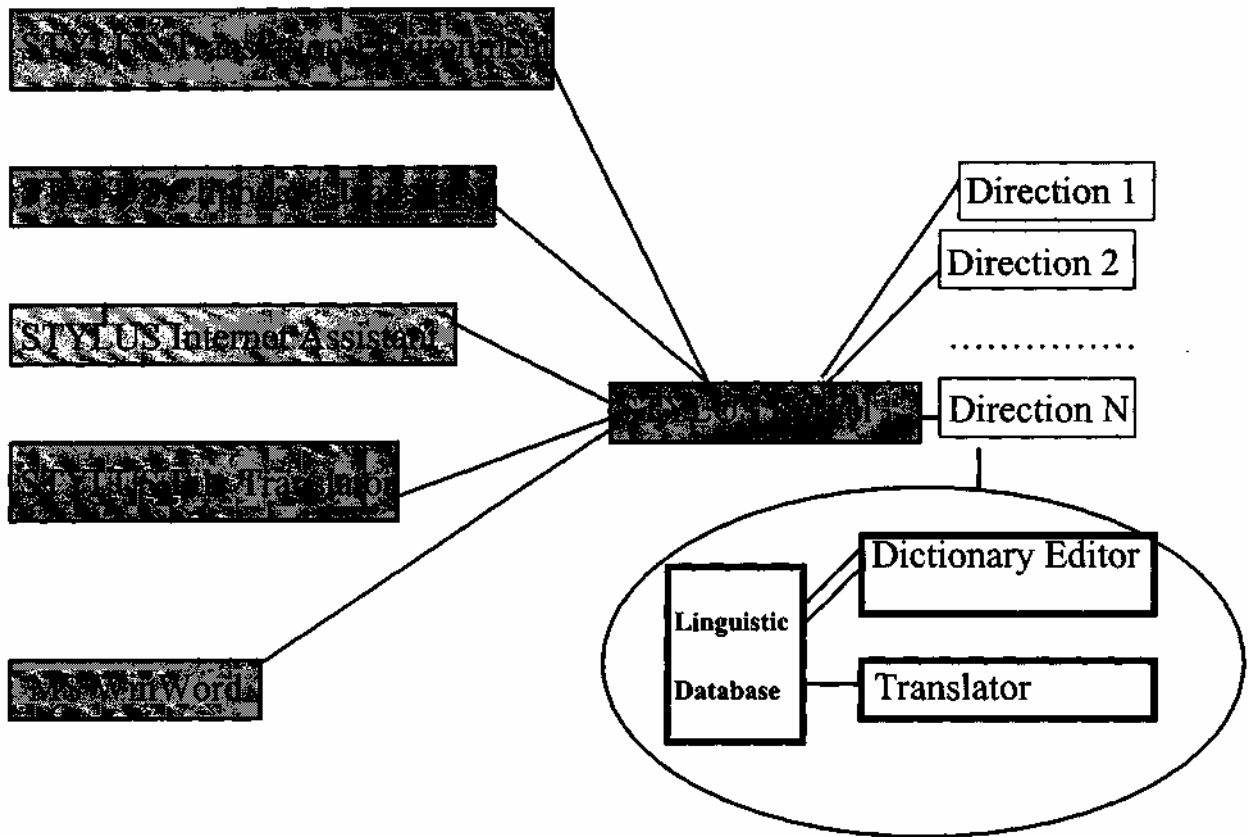
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Stylus is a machine translation system that translates from Russian and into Russian for a number of European languages (English, German, French, Italian). It is a commercial product designed for PCs that runs under DOS, Windows and Windows 95. There is also Macintosh version. Currently, STYLUS is the most widely used Machine Translation software for Russian Language.

The basic architecture of the system software is shown in the figure below.



There are the following system modules :

- Stylus Translation Environment
- Direction modules providing the translation process
- Stylus Kernel

- Setup, Dsetup and Uninstall applications
- Stylus Launcher
- Stylus Internet Assistant
- Stylus File Translator

All these parts, except the Directions modules, are language-independent parts of the system. Stylus Translation Environment is the main application that has the Dictionary Manager to connect or disconnect domain-specific and/or user-created dictionaries and the Text Editor with a possibility to look through the translated text using simultaneous scrolling of the source and target texts, to split the screen vertically or horizontally when scrolling, to use Format Converters if necessary, and also to pre-edit a text before translation, using options of Preserved words, the Find and Replace options and so on. This application has a few options for Font substitution, Statistics for the translated text and others.

Stylus Kernel is an OLE Automation Server designed to provide a possibility of text translation and manipulating with dictionaries for external applications by using the Directions. For instance, Stylus can translate directly from the MS WORD or MS EXCEL. Stylus Translation Environment, Stylus File translator, Stylus Internet Assistant and Stylus Clipboard Translator are also external applications for the Kernel.

Stylus Launcher is an application which runs Clipboard Translator to translate any text which has been placed in the Clipboard without additional interactions with Stylus Translation Environment.

Stylus Internet Assistant can work with Internet Explorer or Netscape Navigator. It provides a possibility of translation of selected fragments of the HTML-page, including the links. The translation is carried out by "drag and drop" of a link or a text fragment to the Translation Toolbar.

The File Translator can process a number of files without interactions. The application accepts some translation options. It allows to translate the text preserving its initial formatting (including HTML-format too).

Setup, DSetup, Uninstall are applications providing the installation of the system and domain-specific dictionaries, if any.

Direction modules make up the translation engines for different language pairs and each of the Directions contains modules providing translation process (Translator), modules editing of the user's dictionary (Dictionary Editor), and Linguistic database. The Linguistic database consists of general-purpose dictionary, domain-specific dictionaries, user's dictionaries, flex tables and grammar tables. The source language morphology is combined in morphological trees, Grammars are designed as a kind of ATN. The Dictionary Editor is employed to manage and update users dictionaries that give a unique way to customize the system for users own needs. To make this procedure easier the Dictionary Editor is developed as a kind of the expert system that submits linguistic data to questionnaires, automatically makes a declension, assigns a set of patterns for an entry. At the moment, six directions are available.