

About Ergane

Ergane is a programme that can translate single words and short expressions from one language to another; i.e. it is a multilingual dictionary. This programme can also be used to practise word memorization and it is equipped with an export module that can generate dictionaries in plain text format.

Ergane (meaning the executable file ERGANE.EXE and the associated files that are mentioned in the packing list which can be found in the technical manual TMANUAL.WRI) is a freeware programme that can freely be copied and distributed. Only the following restrictions apply:

1. Ergane must be distributed (sold, hired out or given away) in its original form, i.e. with all associated files included and unaltered (with the exception of the third party software necessary to run the EXE file).
2. The text files (with the extensions .WRI and .INF) may not be altered.
3. The documents in the aforementioned text files may be included, partially or completely, in other works only if the source is mentioned and if the included text is unaltered (unless changes from the original text are clearly indicated).

If you happen to find errors, either in the programme itself (I expect it will still contain many bugs) or in the information, or if you would like to send me some contributions (e.g. important words missing from the vocabularies) you can send me an email in English, Dutch, Afrikaans, German or Esperanto.

The main form

When loaded the programme displays the main form which shows two lists with the names of languages Ergane could find a vocabulary of. You select the language from which you want to translate by clicking on a name in the leftmost list and likewise you select the language to which you want to translate by clicking on a name in the rightmost list. It is also possible to select the same language in both lists, except when the language is Esperanto. The reason for this restriction is that Esperanto is used as an intermediate language for translation purposes and therefore has no vocabulary files of its own.

If you doubleclick on a language name in either list, a form will be loaded that provides information about that particular language.

On the righthand side of the languages lists there are five buttons which have the following functions:

Dictionary: This button loads the dictionary module if you did select two languages.

Practise: This button loads the word memorization module. The programme chooses randomly words from the languages selected in the righthand list and displays the equivalents in Esperanto and the language selected in the lefthand list (unless no equivalent can be found in the vocabulary list, in which case only the Esperanto equivalent is displayed). The user is then asked to enter a translation in the language from the righthand list.

Keyboard config.: This button loads a form on which all the characters of a particular script (e.g. Latin or Greek) can be displayed. If you click on a character the programme will display the keyboard character or function key that is used to generate this character. This form also contains a drop down list with all the characters supported by the local Windows version and the function keys (with and without the shift key). This list can be used to assign a character in

Ergane's character set to a character generated by the keyboard or to a function key.

Export: This button loads the export module that can be used to generate wordlists in several possible character sets.

Exit: This button is used to terminate the programme.

The menu bar of the main form contains three menus: Colours, Fonts and Miscellaneous.

Colours: This menu contains the following items:

Use default colours: When this item is selected the main form is displayed in the default colours.

Use user selected colours: When this item is selected the main form is displayed in the user selected colours.

Set background colours: This item is a submenu with the items "Form" and "List boxes"; each of these items allows the definition of a user selected background colour for each of these objects.

Set foreground colours: This item is a submenu with the items "Form" and "List boxes"; each of these items allows the definition of a user selected foreground colour for each of these objects.

File: If you select this item the currently shown user selected colours will be registered and replace the previous values.

Fonts: This menu contains the following items:

Use default fonts: When this item is selected the main form is displayed using the default font selection.

Use user selected fonts: When this item is selected the main form is displayed using a user selected font selection.

Background: This item is a submenu with the items "Form", "List boxes" and "Push buttons"; each of these items allows the definition of a user selected font for each of these objects.

Foreground: This item is a submenu with the items "Form", "List boxes" and "Push buttons"; each of these items allows the definition of a user selected font for each of these objects.

File: If you select this item the currently shown user selected fonts will be registered and replace the previous ones.

Miscellaneous: This menu contains the following items:

Default colours at start-up: If this item is selected the programme will use the default colours at the next startup.

User selected colours at start-up: If this item is selected the programme will use the user selected colours at the next startup.

Default fonts at start-up: If this item is selected the programme will use the default fonts at the next startup.

User selected fonts at start-up: If this item is selected the programme will use the user selected fonts at the next startup.

AA conversion: If this item is selected and the "from" language is Danish or Dano-Norwegian then a double A entered by the user will be converted to an A with a ring on top of it.

AE conversion: If this item is selected and if the "from" language is Danish, Dano-Norwegian, Icelandic or Old English then an AE combination will be converted to an AE ligature.

IJ conversion: If this item is selected and the "from" language is Dutch then a IJ combination will be converted to an IJ ligature.

OE conversion: If this item is selected and the "from" language is German, Swedish, Icelandic, Turkish, Finnish or Hungarian then an OE combination will be converted to an O with a dieresis (umlaut). If this item is selected and the "from" language is French then an OE combination will be converted to an OE ligature.

UE conversion: If this item is selected and the "from" language is German, Turkish or Hungarian then a UE combination will be converted to a U with a dieresis (umlaut).

RR conversion: If this item is selected and the "from" language is Basque then an RR combination will be converted to a R with an acute accent.

Note: These conversion items are selected by default (except for UE conversion) and de-selections are not saved when the programme is terminated.

When typing Thai or Lao a double "sara e" is automatically converted to a "sara ae".

Ergane's character set

The number of characters in Ergane's character set (or better: glyph set) is far greater than the number of available keys on a keyboard. In order to type all characters that are necessary for entering words in all supported languages the following tricks are used:

1. Each time that a "from" language is chosen the input routine switches to the appropriate script mode. So for English the Latin script is used, for Russian the Cyrillic script, etc.
2. Diacritical marks like accents are added to an already typed character with CTRL key combinations. The following combinations are used:

CTRL-A: acute accent.

CTRL-B: breve (Latin) or spiritus asper (Greek)

CTRL-C: circumflex accent

CTRL-D: dieresis

CTRL-G: grave accent

CTRL-L: macron (Latin) or spiritus lenis (Greek)

CTRL-P: dot (over a character)

CTRL-Q: caron

CTRL-S: cedille

CTRL-T: tilde

CTRL-U: dot (under a Latin character) or iota subscript (Greek)

In addition the double quote is used for the double acute accent (used in Hungarian).

Not all characters can be combined with all diacritics; if you try to create an undefined combination the programme will only sound a beep. On the other hand, there are characters with more than one diacritical sign, such as a U with a dieresis and a acute accent (used in Mandarin). The diacritics can be added in any sequence: U + CTRL-D + CTRL-A will have the same result as

U + CTRL-A + CTRL-D.

Ergane switches automatically to the "primary character set" for the selected "from" language when the dictionary form is loaded. The primary character set is the one used in the vocabulary files for that language; it is the Latin script for all languages except for the following ones:

Greek (Greek script), Irish (Irish script), Russian (Cyrillic script), Serbo-Croatian (Cyrillic script), Thai (Thai script), Laotian (Laotian script).

The character set for displaying the translations in the "to" language is the primary character set by default but this can be changed with the "Script" menu for some languages:

Language	Secondary script(s)
English	IPA
Greek	Latin
Irish	Latin
Russian	Latin
Serbo-Croatian	Latin
Thai	Latin, IPA
Lao	Latin, IPA

In order to keep the input routine not too complicated I defined only one edit key; the backspace key deletes the character left of the cursor. When there are three characters on top of each other (possible in Thai and Lao) the most recently entered character is deleted first. Digraphs and characters with diacritics are considered one character when backspacing.

Romanization

For practical reasons the vocabularies for Mandarin and Japanese are "romanized" although the use of ideographic and syllabic script is possible in principle and may be supported in future versions. For Mandarin the official pinyin spelling is used, for Japanese the "kunrei-siki" system shown in the following table of Japanese syllables, is used.

a	ka	sa	ta	na	ha	ma	ya	ra	wa	ga	za	da	ba	pa
i	ki	si	ti	ni	hi	mi		ri		gi	zi	di	bi	pi
u	ku	su	tu	nu	hu	mu	yu	ru		gu	zu	du	bu	pu
e	ke	se	te	ne	he	me		re		ge	ze	de	be	pe
o	ko	so	to	no	ho	mo	yo	ro		go	zo	do	bo	po

a	kya	sya	tya	nya	hya	mya	rya	gya	zya	bya	pya
u	kyu	syu	tyu	nyu	hyu	myu	ryu	gyu	zyu	byu	pyu
o	kyo	syo	tyo	nyo	hyo	myo	ryo	gyo	zyo	byo	pyo

For those familiar with the better known Hepburn System, here is a conversion table for the syllables that are represented differently:

cha	=	tya
chi	=	ti
cho	=	tyo
chu	=	tyu
hu	=	fu
ja	=	zya
ji	=	zi
jo	=	zyo
ju	=	zyu

sha = sya
shi = si
shu = syu
sho = syo
tsu = tu

The keyboard configuration files are designed for a US keyboard but they can be used with any keyboard and can be adapted for other keyboards with the "Keyboard configuration module". In that way you can use keys that generate non ASCII characters such as the accented characters on a French keyboard or the Cyrillic characters on a Russian keyboard.

The dictionary form

The dictionary form has an input box where you can enter a word or short expression in the "from" language; the programme will then display the Esperanto equivalents of all known meanings of this word together with the translations in the "to" language (if available). If there is more information than fits on one page the "Next word" button will be enabled and you can click on it to switch to the next page.

The input box and display box are cleared by clicking on the "New word" button after which another word can be entered.

When the "from" and "to" languages are the same (not possible for Esperanto as the intermediate languages has no vocabularies of its own) it is possible to find synonyms or words that match a certain pattern.

For pattern searching the asterisk character "*" (only allowed at the beginning and/or end of a word) represents a string of characters of any length while the atpersand character "@" represents any character in that position. E.g.

c@d* corresponds with *cod*, *code*, *codfish*, et caetera.

*ix corresponds to *fix*, *affix*, *appendix*, et caetera.

When pattern searching is used Ergane never returns more than 60 words because of memory limitations and the same word can appear more than once if it corresponds to more than one Esperanto word.

In the left corner of the dictionary form there are three buttons labeled "Select practise file", "Add words" and "Delete words". These buttons are used to create and edit files that can be used as a source for word memorization (unless you are directly translating from Esperanto).

When you click on "Select practise file" you can open a new or existing file to store selected words in. The name of this file appears in the box "Current practise file" and the number of selected entries (initially 0) appears in the box "Number of entries". If you let Ergane find the translations of a word you entered you can store all meanings that are found by clicking on the button "Select words" after which the "Number of entries" is incremented accordingly.

Behind each line of translations (i.e. words that correspond to the same Esperanto word) there is a check box labeled "Exclude" and you can use these check boxes to exclude meanings of the entered word that you want to ignore when practising. If Ergane knows only the Esperanto translation of a word the programme sets the exclude status "on" by default. Note that the exclude statuses of lines that are not displayed (i.e. they are on a next page) are undetermined; if you want to make sure that there are no meanings stored that you do not want to be stored, you should check any following pages too.

Storing one word with the same Esperanto equivalent more than once has no effect but meanings that were excluded initially can be added later on.

The button "Delete words" is used to remove words from a file; "exclude" here means "exclude from the deletion process"! Deleting words that are not present in a practise file has no effect.

Note that existing practise files cannot be used after you have copied an updated vocabulary file for the "from" language because only pointers to the words in the dictionaries are stored. If you are going to use a new file these pointers will very probably point to other words than they originally did!

When you create a practise file with for instance French as "from" language and English as "to" language you can use this file as a source for practising by selecting for the practise module "English" as "from" language and "French" as "to" language. The programme will then show English words and ask you to enter an appropriate French translation. Instead of English you could choose any language as "from" language (except for French of course) but it is not possible to select this practise file for any other language than French as "to" language because Ergane knows that it contains French words.

If you have the toponyms files installed it is possible to translate certain proper names (mostly toponyms) that have an Esperanto equivalent from any language to Esperanto. If you enter a name that is not known in the "from" language Ergane will look in toponyms if the name is not present in the vocabulary for the "from" language. For instance, if you try to translate "Brussels" from English to Esperanto or "Bruxelles" from French to Esperanto the programme does not need to check toponyms because both these languages have their own names for this city. But if the "from" language is a language without its own name for Brussels, say Swahili, you can enter one of the two names for Brussels that are used by the inhabitants themselves (French "Bruxelles" or Dutch "Brussel") and the programme will find the Esperanto "Bruselo" in the toponyms vocabulary. Vice versa, if the "from" language is Esperanto and the "to" language is Swahili the name "Brussel" will yield "Brussel" and "Bruxelles" as translations.

The toponyms vocabulary contains proper names that:

- a) are relatively well-known internationally (e.g. New York, Paris, Texas, Hongkong).
- b) have their own name in more than one natural language (Bruxelles/Brussel/Brussels/Bruessel/Bryssel).
- c) have different names (or spellings) in the same language.

I have to admit that most of the Esperanto names in the toponyms vocabulary are my own inventions and some may be changed in future versions.

The practice form

The practice form is used for practising word memorization. You choose a "from" language and a "to" language" on the main form (neither of them can be Esperanto) and push the "practise button". Ergane will randomly choose words from the "to" language and show the Esperanto equivalent along with the translations in the "from" language (if available). If you enter a valid equivalent in the "to" language the programme will choose the next word, if you type in a wrong word (i.e. a word not known to be a suitable translation) there will be a beep and the error counter will be incremented by one.

The entering of a translation can be skipped by pushing the "Next word" button in which case the error counter remains unchanged. The possible translations will be shown in the input box when

you click on it; this does neither affect the error counter.

It is possible to select a subrange of all available words by changing the numbers in the "from" and "to" boxes on the top of the form. This can be useful if you are systematically learning the words in the file or if you want to ignore the first part of the vocabulary because this is where the names of places, historical and mythological figures et caetera are stored and which you may want to ignore.

Instead of a random selection you can choose for selection according to word order in the vocabulary file. In order to do this you must click on the "random selection" check box. When random selection is off the next word will always be the word following the previously chosen word in the dictionary and the first word will be the one with the sequence number that is shown in the "from" box. When the word with the number in the "to" box has been reached, the number of the next word will be resetted to that of the first word and the sequence starts again. By clicking the "random selection" box again the random selection mode is activated again.

After you have made the first mistake two radio buttons will be enabled on the form: "all words" and "only errors". By default "all words" is "on" which means that words are chosen from the vocabulary file. If "only errors" is chosen the words are chosen from the list of previous mistakes so that you can concentrate on the words that you did not know.

The error lists (one for each language) are not automatically erased and errors made in various sessions are cumulatively stored in them. They can be deleted by clicking on the button "Erase errors" that also becomes enabled after the first mistake has been made.

Another button, which is always enabled, is marked "Score 100%" and it is used to reset the error counter to zero.

Both the display of the words in the display box for Esperanto and that of the words in the display box for the "from" language box can be suppressed by clicking on the check boxes on the leftside of the display boxes.

By default the programme only selects words for entering in language Y that have a known equivalent in language X. Because the vocabulary of language Y is the source of words it is quite possible that from time to time a word is selected that has no equivalent in language X, especially if the vocabulary of Y is larger than that of X. If this happens the programme seeks other words until it found a suitable one or until it decides that there is no suitable word in the given interval. If the vocabulary of Y is very much larger than that of X this process can take quite a long time; if you think you have waited long enough you can interrupt the searching process by pressing the "break" button behind the Esperanto display box.

By setting the check box "translation required" off you can disable the search process for suitable words but in that case only the Esperanto translation is guaranteed to be displayed in all cases (unless displaying is disabled too).

The search process for a suitable word is significantly faster if displaying the Esperanto translations is disabled. If "translation required" is switched on then displaying these translations is disabled automatically although it can be enabled again by the user if he wants to. Vice versa, if "translation required" is switched off, then displaying the Esperanto translations is enabled automatically.

It is also possible (and probably a lot more useful) to let the programme pick words from your own selections. This can be done by opening a practise file that you created with the dictionary module after which this file will be used as the source of words.

As said before Esperanto cannot be chosen either as the "from" or "to" language for word

practising but the first limitation can be circumvented. If you want for instance to practise your knowledge of Esperanto by typing English equivalents of randomly chosen Esperanto words, you choose English as the "to language" and any other language than Esperanto as "from language", say "Zulu" (preferably a language with a small wordlist to gain some speed). Then you de-activate the options "Zulu translation required" and "Show Zulu words" by clicking on the associated check boxes, which leaves only Esperanto as the language of which words will be displayed (The option "Show Esperanto words" is automatically activated when the two options mentioned above are de-activated).

The keyboard configuration form

This form is for configuring your keyboard (new in version 2.1) and for displaying the current configuration. This form contains a display area where all the characters of a supported script (selected with the "Script" menu) are shown; the form is loaded using the Latin script selected by default.

If you clicking on a certain character in the display area Ergane will display the keyboard character that will be converted to this character (or the name of the function key that generates the character). If the character is made up with one or more diacritical marks the necessary control sequences are also displayed. Also the number of the character in Ergane's character set, the number in the Unicode set and its Unicode name are displayed (the last two only if I have been able to identify the character in the Unicode set).

This form also contains a combo box that contains all the characters supported by your local Windows version and also items referring to the first 24 function keys (F1 to F12 and Shift F1 to Shift F12). This combo box is used to assign a function key or Windows character to an Ergane character. It is easiest to explain how it works by giving an example:

Suppose you are working with a French keyboard and you want to use the key combination that normally generates an "e" with an acute accent. Of course you could use "e-CTRL-A" and although this is much better than Window's Alt-Numeric Key sequence or the "Special characters tool" it would be nice if you could type this character the way you are used to.

So you press the button "Keyboard config." on the main screen, click on the letter "e acute accent" in the picture of the character set selection that is shown in the right part of the window to select the desired character and then you select "e acute accent" in the combo box "Mapped to key/character".

Now the programme will convert the letter "e acute accent" generated with the appropriate key combination on a French keyboard to its equivalent in the Ergane set.

Note 1: All changes in the keyboard configuration are immediately made but they are not shown in the keyboard configuration window. To see the changes, close this window and then re-open it.

Note 2: If a character or function key was already assigned to an Ergane character the new value will overwrite the old one. It is not possible to assign two different characters or function keys to the same Ergane character; it is possible though to assign a character and a function key both to the same Ergane character (not very useful I would say).

Note 3: The possibility to modify the recently typed character by using a control key still exists after an assignment. In the above mentioned example "e CTRL-A" can still be used to type "e acute accent".

Note 4: All characters that have a keyboard character assigned to them can also be generated with the standard Alt-Numeric-key sequence. Initially this only works for the characters that

belong to the 7 bits ASCII set (the ones found on a US keyboard) but in the example mentioned above it would be possible to generate "e acute accent" after assignment with Alt-0233 (Windows International) or Alt-130 (CP 437) too (if you like to press 4 or 5 keys instead of 1 or 2).

Note 5: Take care to make a backup copy of your re-configured .KMP file before you install a new version of Ergane. The distributed .KMP files only contain a minimal set of assignments and your own modifications may be overwritten by them when you install a new version.

The export form

Purpose

This form is used to generate word lists that you can modify and use as a basis for your own applications. Like the main form it contains two language lists with which you select a "from" and "to" language. With another list box you can choose a character set that will be used to generate the text files.

Word selection

There is a set of three radio buttons on the export form (not visible when not applicable). They have the following functions:

1 (Only translatable words): Only the words from the "from" language that have known equivalents in the "to" language are selected.

2 (All words): All words from the "from" whether they have or have not a known equivalent in the "to" language are selected.

3 (Only untranslatable words): Just the words from the "from" language *without* a known equivalent in the "to" language will be selected. This option is useful for users who want to contribute to Ergane's vocabularies. They can choose a "from" language (preferably one with a large vocabulary) and a "to" language that they know well. After generation of the list they can load the file with a text editor, replace the question marks with translations and mail the edited file to me.

Choosing a character set

Naturally you should select a character set that can be used for both languages. Ergane does not allow the selection of a character set with which at least one of the languages cannot be used. For instance, CP 866 is suitable for English and Russian but CP 437 is not, because it lacks Cyrillic characters. Often (because 7 and 8 bit characters set have only a very limited number of characters) the programme will warn that some unsupported characters may be substituted by a "@" character or digraph. This will for instance happen if you want to use ASCII for English and French because French uses accented characters that are not found in the ASCII set. It is for you to decide whether this is acceptable or not. In extremely rare cases an unsupported character may be encountered although Ergane did not warn about this possibility. This is because a language may have borrowed a word from another language and retained the original spelling with characters not normally used in this language. For instance, there are some French loanwords in English that are sometimes spelled with, and sometimes without accents (Ergane knows usually both variants).

You can check which character sets are suitable for a language by loading the language info for a particular language (by double clicking on a language name in a language list). You can also double-click on the name of a character set; all displayable characters of that set are then displayed in a window not unlike that of the keyboard configuration form (you can also click on

each character to get its name and code numbers).

Monolingual lists

It is also possible to generate a word list of just one language; just click on either language list to do this and do not select a second language.

Filters

The export form has a filter menu with the following filters that control the choice of words in the "from" language part of wordlists::

a) Excluding definitions: This filter (on by default) causes *definitions* to be left out. Definitions are pieces of text between <> that are sometimes used when there exist no suitable translation for a word in another language. An example is the English indefinite article "a" which has no equivalent in Esperanto. Therefore the definition <*nedifina arikolo*> is used instead.

b) Excluding expressions: When this filter is active *expressions* (pieces of text with one or more spaces in them) are excluded from the "from" part of the list.

c) Excluding capitolized words: In fact this filter causes all words with at least one upper case letter in them (e.g. Tuesday, New York, eMelika) to be excluded from the "from" part of the list.

Deselecting languages

Languages can be de-selected by clicking with the right mouse button anywhere but in a language list on the export form.

Interrupting

Because building a wordlist can be a lengthy procedure this form contains a break button with which the process can be interrupted.

The language info form

This form which is activated by double clicking on a language name shows names of the regions where the language is spoken, its family tree and a list of the suitable character sets that are supported by Ergane.

If you click on the button "Vocabulary size" a popup window is shown with the number of entries in each of the two dictionaries for the language in question.

The button "More" is used to load a document that contains more information about the language. At present most of these documents only contain the names of persons who have contributed to the building of the vocabularies and the titles of the books I used as sources. The documents for Esperanto and Dutch contain some more information, namely the first part of a do it yourself course for learning these languages. In due time courses will be added for all languages supported by Ergane.

The buttons at the top of the display area can be used to leaf through the document and the combo box is for jumping to a particular paragraph. When you leave the document the current page is remembered and when you open the document again that particular page becomes the current page again.

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