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Petro Mohyla Black Sea National University

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**INFORMATION
TECHNOLOGIES
IN TRANSLATION**

A STUDY GUIDE

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The basis of the training course Information Technologies in Translation lies the model of work cycle on translation, which describes the sequence of necessary actions for qualified performance and further maintenance of written translation order. At each stage, translators use the appropriate software (S/W), which simplifies the work and allows to improve the quality of the finished documentation.

The course familiarizes students with all stages of the translation work cycle and with those components of the software used at each stage. Besides, this training course includes information on working with the latest multimedia technologies that are widely used nowadays for presentations of various information materials.

This training course is designed primarily for those students who acquire the qualification of translator, but it can be useful for those willing to improve their knowledge in working with translation programs.

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INTRODUCTION

In the last 10–15 years, the nature of translator's work and the requirements have significantly changed. First of all, changes have affected the translation of scientific-technical, formal and business documentation. Today, as a rule, it is not enough to simply translate a text, using the computer as a typing machine. Customer expects an interpreter to design a finished document in such way that it will correspond to the appearance of the original as accurately as possible, and thus meet the accepted standards in this country. Translator should have an ability to effectively use previously made orders with the same topic, and the employer, in his turn, counts on a significant time and resources savings while translating repeated or similar text passages. These tough, and often contradictory conditions can be followed only in the case when a translator not only have a perfect command of foreign language and mother tongue, and deep knowledge of a chosen vivid field, but also feel confident in modern computer technologies.

The result of translation process automation was the creation of modern technologies aimed to improve efficiency of translator's work. These technologies have transformed translation from a purely linguistic activity into a profession which requires additional "technical" skills and abilities. Apart from compulsory translator's knowledge for content material processing, while translating he ought to use additional translation "technical" tools.

As a result of constant increasing of translation scope arose an urgently required optimization of the translator's tools through the using innovative computerized technologies. Depending on the translation technology, there are distinguished following computerized translation types:

- 1) Machine-Aided Human Translation;
- 2) Integrated Translation Systems (Integrierte Übersetzungssysteme);
- 3) Human-Aided Machine Translation;
- 4) Fully Automatic Translation.

Unfortunately, modern theoreticians of translation pay little attention to the research of the mechanisms of computerized translator's workplace organization, to the ways of linguistic information search studying in the process of translation making, especially single-disciplined terminology with the use of integrated translation memory, integrated and online terminology data bases.

Information Technologies in Translation

As an anthropocentric factor, human should be observed in leastways two aspects:

- 1) human and his way of thinking and behavior as a sample for computer technologies creation;
- 2) human as a user of modern technologies.

Practice shows that the recent foreign languages faculty graduates, who claim for a vacancy in translation bureau, as a rule, have trouble picturing of work process in such organizations.

Training course "Information technologies in Translation" is prepared to eliminate this problem as far as possible. Basically, the course corresponds the model of translation work cycle which describes the sequence of actions necessary for qualified performance and further order maintenance of written translation. At each stage, the translators use the appropriate software (S/W) which simplifies the work and allows a translator to improve quality of finished documentation.

The course introduces students all stages of the translation work cycle and those software components which are used at each stage. Besides, this training course includes information on working with the latest multimedia technologies that are widely used nowadays for presentations of various information materials.

This training course is designed primarily for those students who acquire the translator's qualification, but it can be useful to all willing to improve their knowledge in working with translation programs.

I. GENERAL INFORMATION ABOUT INFORMATION TECHNOLOGIES

1.1. The definition of information technology

Information (from Lat. *informatio*-informing, explaining, presentation, from Lat. *informare* – to form) – information (messages, data) about animate or inanimate objects, their properties and mutual influence on each other regardless of their presentation form.

Technology (from Greek *techne*) – technique, art, skill.

Information technology (IT) – a set of means and methods for data (primary information) collection, processing and transmission and for obtaining information about the status of the new quality and condition of an object, process or phenomenon (information product).

Object of Information technology – production of information for its analysis by human and approval of a decision on any action implementation relying on it. Practical use of data processing methods and means may be different, as highlighted in the following **kinds of IT**:

1. Global information technology – includes models, methods and means that formalize and allow society information resources using.

2. Basic Information Technology – designed for certain implementation area (production, scientific research, education, etc.).

3. Individual Information Technologies – realize data processing in solution of functional tasks (e.g., tasks of accounting, planning, analysis).

Like all the others, information technologies are constantly evolving and improving. They are contributed by emerging of new technical means, development of new concepts, methods of data organization, their transferring, persistence and processing, forms of users' interaction with technical and other components of information and computing systems.

Technical means of information production are *hardware*, *software* and *mathware*. Apart from these means, there are selected such software products as "*Toolkit*". For greater clarity, it is instantiated and named as software toolkit.

Software toolkit – one or several interrelated software products for a specific type of computer in which work method allows user to reach the desired goal.

1.2. Comprehension Questions

1. Definition of Information Technology, its goal.
2. Kinds of information technology.
3. History of IT.
4. IT technical means.
5. IT Toolkit.

1.3. Translation, Information Technologies in translation

Translation is the number of actions performed by a translator in order to interpret the text meaning in the primary (or source) language and to create a new, equivalent text in another language. Translation is the mean of international communication. Translator makes it possible to exchange information between people who speak different languages, interpreting the text into a target language that has an identical communication significance to the original text.

Translation process includes two mental processes – understanding and verbalization. First, translator understands the context of a source language, i.e., converts and summarizes the information that resides in his own intellectual program, and then develops this program in the language, in which he performs the translation.

Translation goal is the establishment of equivalence relations between an original text and a target text (in order to make both texts similar in their meaning). These limitations include the context, source language grammar rules, tradition of writing, its idioms, etc.

Translation, as one of the types of human activity, must be adapted to the modern society requirements. The **essence of translation process** remains unchanged: *his first stage* is the production of a draft text, and *the second* – try-out test, during which translation is corrected and changed to make a proper look of translation.

Translation means and tools. Information technologies have created new electronic culture that came to replace traditional printing culture and work process with documents and information has simplified and became faster. Machine translation programs and computer translation tools are the part of this new culture. In English terminology information technologies in translation practice are divided into two major **classes**:

1. MT (Machine Translation). This class is known in Ukrainian-speaking linguistics as automatic or **machine translation**, i.e., programs that more or less successfully replace the human translator completely.

2. CAT (Computer-assisted/aided translation). Unlike the MT, CAT-systems only automatize and facilitate translator's work in its different aspects. First of all, these are the programs that implement the concept of translation memory (or TM), such as the ABBYY Lingvo, Trados, OmegaT, DejaVu, WordFast, etc.

MT made quick translation possible, but by now in this area remain a lot of unsolved problems. Translation depends on a context and various connotations of words and word combinations. Full context flow together with the text is not always possible to provide, so automatic translation is limited by specific topics, and almost always needs further editing.

As for translation memories (TM), then it is a linguistic database that stores the original texts and their translations. These texts are divided into segments, which often coincide with the sentences. TM allows to facilitate a translation – system "remembers" translated phrases (segments) for future use, so translator does not have to translate twice the same sentences. These programs are extremely helpful for translation of texts with high degree of repeatability.

The main objective of "Information Technologies in translation" course is getting the basic knowledge of the main principles and techniques of modern systems of automatic translation (Machine Translation, MT) and computer-assisted translation (CAT). MT and the CAT are the main tools of translation activity, which can be implemented in practice. The course includes a real experience of direct CAT-tools using in translation process. The core of the course and its main content is learning to work with translation memory systems (TM). The modern translator should be able to apply effectively automatic translation systems, such as Pragma, Prompt and Google Language Tools and translation memory systems (ABBYY Lingvo, Trados, OmegaT). The translator ought to know about MT and TM principles (translation memory), as well as other systems of CAT (terminological database, packages analysis, concordances, etc.), their place in translation tasks solution; to be able to work with the resource TheVisualThesaurus.com, archivers WinZip, WinRar for translation and glossary archiving. While written translations performing translator must be able to use Bat!, CuteFTP Pro, VentaFAX (receiving an order by email or fax) as well as to work with OCR programs (ABBYY FineReader).

1.4. Comprehension Questions

1. Translation.
2. Translation process and its essence.
3. Translation goal.
4. Classes of Information Technologies.

1.5. Text translation in application programs

While working with text there are following actions:

- direct text translation;
- inclusion of the ScreenTip with translation in MS Outlook and MS

Word applications.

Machine translation seems convenient, when it is required to convey the fundamental content meaning and make sure that it is the necessary. However, if the document contains important and valuable information, it is recommended human-performed translation, as far as machine translation is not always able to fully convey the meaning and style of the text. Translation can be performed while working in applications.

Application (or app) is a program for performing certain custom tasks and is aimed at direct interaction with a user. In most operating systems, applications cannot access the resources directly, and interact with the equipment, etc. by using the operating system.

Application software include computer programs written for or by users for the computer-specific work provision. Programs of orders processing or creating mailing lists are the examples of application software.

Applications, which can perform text translation, include the following products of Microsoft company:

- *Excel*;
- *OneNote*;
- *Outlook*;
- *PowerPoint*;
- *Publisher*;
- *Visio*;
- *Word*.

Inclusion of ScreenTip with translation in MS Outlook and MS Word applications.

When working with a text you can include improved ScreenTip that translates passed with the mouse word. English, French and Spanish are supported default languages. Other languages are available if the translation dictionary service is available for those languages. This ScreenTip function is possible when working in Outlook and Word.

1.6. Translation work cycle

The work of translator can be represented as the model, which describes the sequence of actions necessary for qualified performance and further maintenance of written translation order. At each stage, translators use the appropriate software (S/W) which simplifies the work and allows a translator to improve quality of finished documentation (see table 1).

Table 1

Translation work cycle and software which is used

Stage	Software type	Examples of programs
Obtaining of a source document from a customer	E-mail, ftp-client, fax	The Bat!, CuteFTP Pro, VentaFax
Preparation of a source text to translation	Optical character recognition programs	ABBYY FineReader
Written translation and editing	Electronic dictionaries, DataBase terminology of TM program	ABBYY Lingvo, Trados Workbench, StarDict, GoldenDict, OmegaT, Google Translator, Prompt, Pragma, Multitran
Layout	Layout software	Quark xPress etc.
Quality control of performed translations and terminology data base update	TM Programs	ABBYY Lingvo, Trados MultiTerm, Trados Workbench
Sending of the translated document to the customer, receiving and comments implementation	E-mail, FTP-client, TM programs	The Bat!, CuteFTP Pro, Trados Workbench
Translation and glossary archiving	Archivers	WinZip, WinRar

Subsequently, all cycle stages with those components of software package that are used at each work stage of professional translator will be looked upon.

1.7. Comprehension Questions

1. Application.
2. ScreenTip.
3. Translation work cycle.

II. ELECTRONIC MAIL PROGRAMS

2.1. Receiving translation orders by e-mail

To create, send, receive, and store e-mail messages, one applies special mail programs.

Mail program is the software installed on a user's computer and designed for receiving, writing, sending and storing e-mail messages of one or more users (for example, in the case of, multiple accounts on the same computer), or multiple accounts of one user.

In contrast to the mail server, e-mail client usually sends messages not directly to corresponding recipient's server, but to the same acting as a relay mail server. Mostly it is an ISP or company mail server.

Mail sending is often built upon the SMTP protocol.

E-mail client receives messages from one or more mail servers, often it is the same server that is used for sending. Mail receiving is built upon the POP or IMAP protocols.

Usually beginners work with mail signing in the mail server page with the use of popular browsers – Opera, Firefox, Internet Explorer, Chrome, Safari. When logging to the service from any computer user can create, send and receive messages. It is the using of so-called IMAP method that allows to receive, store and send the e-mail messages without downloading them to computer.

Functions of e-mail client can also include: sorting and storing messages, archive messages search, address book, message filtering, that accepted by different criteria, converting formats, encryption, interfaces with office programs and other functions.

You can also receive and send e-mail, not only via Yandex-mail server (or Mail.ru, Poshta.ru, Rambler-mail), but using such e-mail programs as Outlook – Outlook Express, The Bat! and others.

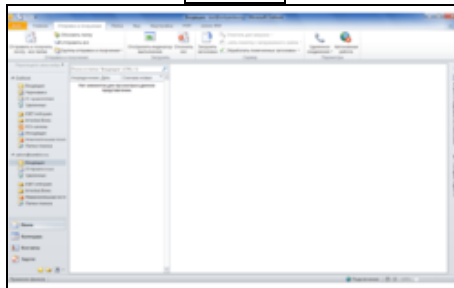
By default e-mail programs setting, messages are downloaded only from "Inbox" folder. All received with the use of mail programs messages are not removed from the mailbox on Yandex-mail server immediately, but moved into the "Deleted" folder. This is done in order to regain new messages in the case of mail program or computer malfunction. It should be known that messages from "Deleted" folder will be automatically deleted in a week.

Commonly used mail programs by different operating systems

Microsoft Windows	Unix-like OS	Mobile phones with J2ME
Microsoft Outlook	KMail (KDE environment)	MailMan
Microsoft Outlook Express	Evolution	Email Viewer
The Bat!	Mozilla Thunderbird	
Mozilla Thunderbird	Mutt	
Opera Mail	Claws Mail	
Windows Mail	Sylpheed	
Lotus Notes	gnus (GNU EMACS)	
	slrn	
	Lotus Notes	

2.2. Microsoft Outlook mail program

Microsoft Outlook



Screenshot of Microsoft Outlook 2010 in Windows environment

Type: mail client.

Developer: "Microsoft".

Operating system: Windows, Mac OS X.

Latest version:

- 2010 (14.0) (Windows);
- 2011 (14.1.0) (Mac OS X)
(June 15, 2010 (Windows),
April 12, 2011 (Mac OS X)).

License: Proprietary software

Website: <http://microsoftoutlook.net>.

Microsoft Outlook is a personal information manager with features of mail client and Groupware – company of "Microsoft" included in the package of Microsoft Office applications.

In addition to the e-mail client features, Microsoft Outlook is the proper organizer that provides functions of calendar, planner, notebook and contact manager. Moreover, Outlook allows to monitor the work with Microsoft Office package for automatic work-book making.

Outlook can be used as a separate application and as a client to Microsoft Exchange Server mail client that provides additional features for collaboration of users within one organization: general mailboxes, task folders, calendars, conference, planning and general meetings time reservation, and coordination of documents.

Microsoft Outlook and Microsoft Exchange Server are platforms for organization of document flow, because they are provided with the custom plug-ins and scripts development system which makes possible document flow additional functions programming (and not only document flow), not provided in the standard user package.

Line

The line in Outlook 2007 was only available in open items, such as e-mail messages, calendar items, contacts or tasks. Now the line in Outlook 2010 is used everywhere, including the main window (Figure 1).

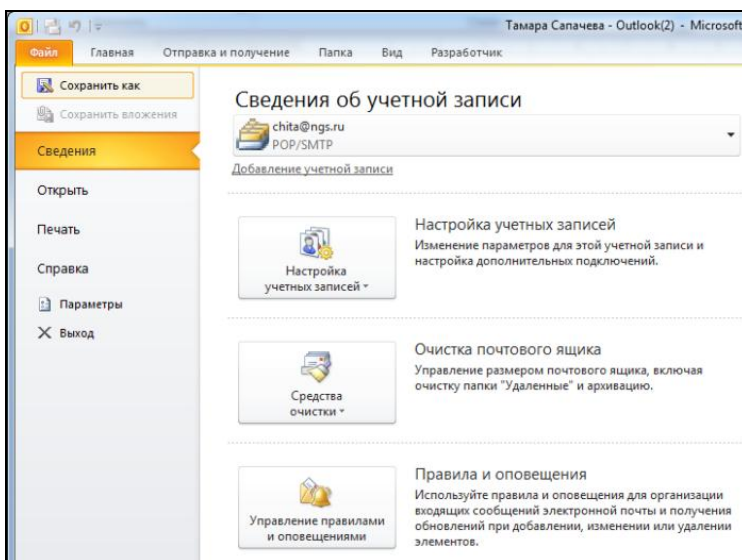


Fig. 1. Line in Outlook 2010 with open "File" tab

Main and contextual tabs located in the upper part of the screen image are used to select groups of commands. Commands designed to create and work with Outlook items, such as messages, calendar items, and contacts are placed on the tab "Home"(fig. 2). "Send" and "Receive" tabs are applied to use commands related with the availability of new Outlook items on the server or items sending, including selected clients.

Commands designed to create, personalize, move or use folders compatibly are placed on the tab "Folder" (Fig. 2c). On the tab "View" (Fig. 2d) you can change and customize the screen image, which shows folders, and show messages in the form of image "Conversations".

Fig. 2a



Fig. 2b

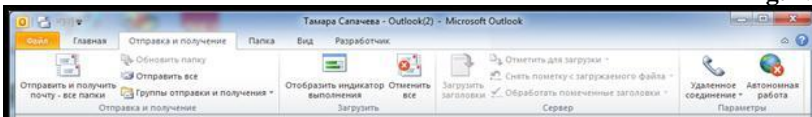


Fig. 2c



Fig. 2d

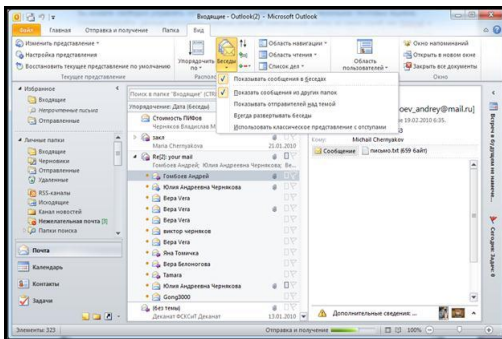


Fig. 2. Tabs: a) Home, b) Send/Receive, c) Folder, d) View

Commands for working with e-mail which is often used on the tab "**Home**". Commands like "**Create**", "**Delete**", "**Reply**", "**Forward**".

For viewing the message in reading pane – "**Reading Pane**", one applies Outlook window in which any given items can be previewed without opening. To display an item in the Reading Pane one can click it once or twice to open. Similarly, when the message has an attachment, click the attachment to view it in the Reading Pane, or double-click to open the attachment in an associated program.

In addition to new interface, Outlook 2010 has advanced useful features for work with e-mail.

Message list is arranged in the form of conversations

1. The image "**Conversations**" (Fig. 2d) cluster related messages (including sent messages and messages in other folders) that helps to simplify managing a large number of messages. User can see the whole conversation and highlight the most important message for him.

2. Presentation "**Conversations**" in Outlook 2010 simplifies e-mail chains tracking and managed, allows saving useful space of the "**Inbox**" folder. Long message chains should be united in several chains which can be fallen into categories, archived, ignored or deleted by several mouse clicks.

3. Conversations are mostly marked with several envelopes or with an arrow in the conversation header. To "expand" the conversation and see all included messages, one needs to click on the arrow.

"Quick Steps" group

Located in the "**Home**" tab (Fig. 2a) "**Quick Steps**" group can provide one click running of several commands, necessary for mutual actions implementation. For instance, with one click one can specify the category and move a message. One can create default quick steps and create own buttons for common actions.

"**Quick Steps**" is a new function in Microsoft Outlook 2010 that provides multitask with e-mail messages, speeding up and simplifying mail boxes management. For example, when frequent moving of messages in a certain folder, one can use a quick step to perform it with one mouse click. Moreover, due to quick steps message sending to manager or colleagues gets easier.

Quick Steps in Outlook 2010 can be configured (Fig. 3). Besides, one can create own quick steps, having formed quick steps collection, that are used for work with e-mail.

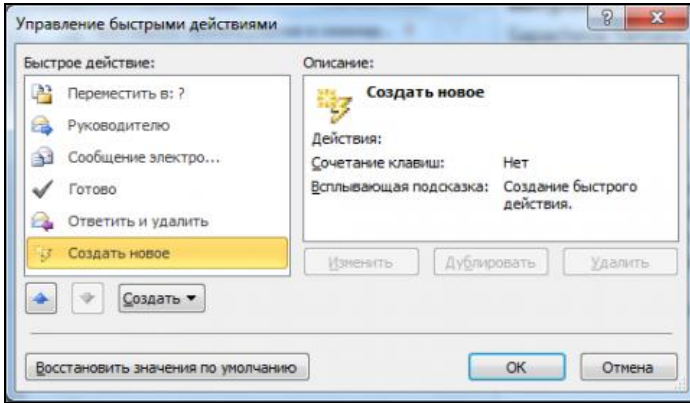


Fig. 3. Quick Steps control

Quick Steps by default

Any of the quick steps can be customized by default. By first using of some quick steps one is suggested customizing them. For example, if required to create a quick step for moving messages to a specific folder, the folder must be specified in advance. In the tab. 1 listed Outlook 2010 quick steps that are used by default.

Table 1

Quick step	Operation
"Move to:"	Move selected message to the specified mailbox folder and mark it as read
"To manager"	Forward message to the manager of the current user. If the organization uses Microsoft Exchange Server, the Manager's name is taken from the global address list and inserted into the "To" box. In addition, the recipient can be specified manually
"Team e-mail"	Forward messages to other members of the working group. If the organization uses Microsoft Exchange Server, the team members names are taken from the global address list and inserted into the "To" box
"Done"	Move selected message to the specified mailbox folder and mark it as done and read
"Reply & Delete"	Open selected message replies and delete outmessage
"Create new"	One can create his own quick step to perform any sequence of commands, having given it a name and an icon

To configure or modify existing quick steps, one must follow the steps.

1. In a mail program "**Home**" in "**Quick Steps**" group click the arrow "**More**", which is situated near "**Quick Steps**", next – click "**Manage Quick Steps**" (Fig. 3).

2. In "**Quick Step**" choose an action you want to change, and then click "**Edit**".

3. In the group "**Actions**" modify or add actions which should be performed within the quick step.

4. If desired, in "**Shortcut key**" specify keyboard shortcuts which are necessary to assign to the quick step.

5. If change quick step icon is required, click the icon near "**Name**", choose the icon and then click "**OK**".

Create a Quick Step

1. In mail program "**Home**" in "**Quick steps**" group choose "**Quick Steps**" collection then click the quick step "**Create**".

2. Select from the list the action type or click the item "**To**".

3. In the field "**Name**" enter the name of new quick step.

4. Click next to the field "**Name**" button to select an icon, choose it and then click "**OK**".

5. In the "**Actions**", choose the action you want to perform within the framework of the quick step. Click "**Add action**" to add other actions.

6. To create a keyboard shortcut, specify the necessary shortcut in "**Keyboard shortcut**".

New quick steps appear at the beginning of the gallery on the "**Home**" tab in the "**Quick steps**" group. Despite the fact that changed quick steps are in the original location of the gallery, their arrangement can be changed in the "**Manage Quick steps**" (Fig. 6).

Organization of collection using e-mail

Sometimes for discussing it is better to use message collection instead of message dialog. Request for collection one can create in one step. To organize collection of all people involved in the conversation, on the tab "**Home**" in the "**Respond**" group, click "**Meeting**" (Fig. 2a).

More efficient work with e-mail

Outlook 2010 includes "**Policy Tips**", which can help to avoid the common costly user mistakes. Notification of the component "**Policy tips**" can be initiated by a variety of actions, such as pressing the "**Answer to everyone**" to send a message to a large list of recipients, the transmission of confidential information to third parties or sending a message to a user who is out of the office.

2.3. Mail program The Bat!

The Bat!



Type: Mail program.

Developer: RITLabs.

Written in: Delphi.

Operating system: Microsoft Windows.

Latest version: 5.0.36 (March, 3 2012).

License: Propriety, shareware (30 days)

Website: RITLabs.com.

The Bat! – a paid program for working with e-mail for OS Windows. Developing by the Moldovan company RITLabs. Program The Bat! is popular among Russian users and users from the former USSR republics.

Has a well-developed filtering and message sorting system, as well as a system for the connection of additional modules (plug-ins), intended (if necessary) for the integration of viruses and spam protection programs from different manufacturers. Necessary plug-ins can be supplied along with antivirus (as, for example, in the case of KAV) or downloaded from a website of the module developers. The program has a built-in mail dispatcher for POP3 servers.

The Bat! supports a vast number of encodings (Cyrillic among them), including Windows-1251, koi8-r, ISO 8859-5, etc. There are mechanisms for filtering and automatic processing of messages, patterns and abilities to organize mailing lists.

Also The Bat! has the ability to backup e-mail messages (in the backup file, or separate for each mail account) or a folder, address book and settings according to the user request or automatically on a schedule. In this case, backup password protection and add comments get possible, and since version 3.99.25, the Bat! attempts to automatically recover a database when it is damaged or deleted from the backup. The function of message parking allows to protect a message (or group of messages) from deleting or moving.

The program can import messages and address book from other applications databases. Today, there are two program versions: Home and Professional. Professional version has spell-checking, messages encryption using the S-MIME and OpenPGP standards (there is a built-in

implementation of these protocols, but one can use external as well), encrypting the local database (including the message settings and address book) and biometric authentication.

Mail program **The Bat!** has a number of vitally needed and simply convenient features that make it easier to work with e-mail. All these functions work perfectly on computers with any Windows operating system. It ought to be remarked that the Bat! is the first mail client certified by Microsoft for use with Windows Vista. Logo Certified for Vista ensures the highest level of all program mechanisms compatibility with this operating system.

Personal information security

A distinctive feature of The Bat! – the widest support for authentication and encryption protocols while working with mail servers. Bat! is one of the most protected mail clients that use a lot of companies, for which the personal information protection is a matter of life and death. The latest version of the Bat! equipped with security "smart buttons" that help make oriented to user information really personal.

Virus protection

The other side of security – protection against harmful codes. Unlike other mailers, the Bat! does not run the scripts automatically, but uses its own mechanism of viewing HTML – Robin HTML viewer, image viewer module that protects against viruses aimed at vulnerability of the operating system mechanisms. In addition, the Bat! compatible with one of the leading antivirus – Antivirus Kasperskiy, the most powerful instrument in the fight against harmful programs. We notice Windows Vista users that, in addition to opportunities mentioned above, Bat! uses such components of Windows Vista as Address Space Layout Randomization (ASLR) and Data Executions Prevention (DEP) to insecure the computer from viruses and harmful codes spreaded via e-mail. The Bat! 4.0 (and later versions) has the built-in URL-Manager for background extraction of images in HTML format. This Manager successfully deals with the harmful codes that are inserted into image.

Filtering

For processing correspondence one applies built-in e-mails sorter that automatically groups the incoming, outgoing, read and processed mail into the appropriate folders. Rules sorting task will take just a few minutes, then one can forget about transferring e-mails from folder into folder manually.

Automatic messages processing

The aforementioned e-mails sorter allows to automatize messages processing: set auto-answer, launch an external application, add recipients in the address book, export or archive messages, extract attachments, etc.

Templates

Bat! can not only add a signature to message, but also lets create e-mail patterns using a large number of special macros. Any box, folder, or recipient may have its own template for new e-mail, reply or forward. Templates appliance allows to speed up significantly the mail preparation, especially when the message includes a standard or often repetitive text.

Quick templates

Quick templates give possibility to automatize e-mails creating process and save time, inserting in a message prematurely typed text. If every day you have to respond in messages the same questions, you will duly appreciate these templates. Quick templates, as well as the usual, have available a complete set of macros that allows you to specify any, even the most complicated, sequence of actions.

Mailing lists

Filtering system of letters is so powerful, that allows to implement with means of Bat! a mailing list where members can add or remove themselves from the list.

Function of parking

Using the parking, you can attach a message by a specific folder and protect it from accidental deletion or moving. You will never lose an important letter, if you "park" it in the appropriate folder.

Backup

All program settings, address books and mail folders can be saved in a separate file and then restored from the backup in case of unwanted change of information or data loss. Archive can be provided with commentary and password protection. Additionally, the Bat! allows creating a separate backup for each mailbox.

Update and installation

Bat! is fully compatible with the new Restart Manager (RM) Windows Vista – you can update Windows components required for the work of Bat! rebooting neither the Bat!, nor Windows. Updating process has never been

so easy and invisible. As for installation possibilities, system administrators (and not only they) will appreciate the new feature "invisible installation", which allows you to install the Bat! without participation of a user.

Efficient encryption

Internal PGP implementation, based on the widely recognized OpenSSL mechanism, allows encrypting messages and sign them with digital combination. Convenient digital keys manager attached. Free apps to PGP v.5.5, v.6.0.2, 6.5, v.7x & v.8 GnuPG are supported as well. In addition, the Bat! works with S/MIME via Internal Implementation or Microsoft CryptoAPI. Bat! is the first mail client that supports data compression S/MIME and works with Secure Socket Layer (SSL) v 3.1/ Transport Layer Security (TLS) v1.0 with AES algorithm.

Mail synchronization

You can synchronize the contents of multiple Bat! exemplars. Mail synchronization allows maintaining two Bat! copies in the same condition. You can selectively save settings of mail boxes, address books, folders and attachments.

Compatibility with Microsoft Exchange

Bat! connects to Microsoft Exchange servers involving the MAPI protocol for calling or messages sending. You only need to install Microsoft Office Outlook or Microsoft Exchange to provide components connecting to Exchange which uses the Bat!.

National encodings

Bat! коректно працює з усіма кодуваннями, включаючи всі російські і східноєвропейські: KOI8-R, Windows-1251, DOS, ISO і т. д. Flexible system of settings allows you to set your encodings for every box and every recipient. In addition, beginning with the Bat! 4.0 MicroEd – internal text program editor supports Unicode encoding. All system fonts and character sets are supported as well.

Message dispatcher

Dispatcher enables POP3- or IMAP-server mail processing, without waiting for it to download. Excellent tool for implementing remote control over your correspondence. Especially useful in the case, if you want to leave extensive e-mails on the server to read them later, or delete e-mails without receiving them.

Address book

Address book contains a list of your recipients. You can group them for classification, or to use the address as a mailing list, that is, send an email immediately to all members of the group.

For each address you can attach a photo, specify the personal data, place of work, e-mail templates to this recipient, list of subscriber's S/MIME-certificates, as well as default encoding.

Interface in 12 languages

Bat! allows you to change the interface language on-the-fly, without restarting the program.

Image viewer module

Bat! is equipped with its own image viewer module. This means that access to attached images goes much faster than via an external application. Users can switch between all images attached to a message. The module supports rotation, dimension and zoom algorithms, full screen mode.

Forms of request

The forms act as instruments for forming automatic processed requests. Request form is aimed to information remote access and managing it off-line in compliance with the security requirements.

2.4. Comprehension Questions

1. Give a general characteristic of **Microsoft Outlook** mail program, describe the main features.
2. Give a general characteristic of **The Bat!**, mail program, describe the main features.

III. OPTICAL RECOGNITION

3.1. Optical character recognition

Optical character recognition (OCR) is the mechanical or electronic transferring of handwriting, typewriting, or printing text images in a sequence of codes that are applied to the image in a text editor. Recognition is widely used to convert books and documents in digital format, for the automation of accounting systems in business or for posting text on a web-page.

Optical character recognition enables:

- text editing,
- words or phrases searching,
- saving it in a more compact form,
- showing or printing material without loss of quality,
- information analyzing,
- applying to a text formatting electronic translation or conversion to a language.

Optical character recognition is the researched issue in pattern recognition, artificial intelligence and computer vision.

Optical character recognition systems require calibration to work with a particular font; in early versions programming needed image of each character, program at the same time could work with only one font. Nowadays, the most widespread are so-called "intelligent systems" with a high degree of accuracy that recognize most fonts. Some OCR systems are able to restore the original formatting, including images, columns and other non-textual components.

3.2. History of optical character recognition system development

In 1929, Gustav Tauschek took out a patent on optical character recognition method in Germany, after which it was Hendel, who inherited it, having obtained a patent for his method in the United States. In 1935, Tauschek also obtained a patent on his method in U.S.A. Tauschek's machine was a mechanical device that used templates and a photodetector. In 1950, David H. Shepard, cryptanalytic from Armed Forces Security Agency, having analyzed the problem of converting printed messages into machine language for computing, built a machine that solves this problem.

After he obtained a U.S. patent, he reported the Washington Daily News (April, 27) and the New York Times (December, 26). Then Shepard founded a company that develops intelligent machines, which soon released the world's first commercial optical character recognition systems.

The first commercial system was installed in Reader's Digest in 1955. The second system was sold to company Standard Oil company for the purpose of reading credit cards when working with cheques. Other systems provided by Shepard's company were sold in the late 1950s, including page scanner for National United States Air Forces, oriented to read and transmit TTY typewritten messages. Later IBM obtained a license to use patents of Shepard.

Approximately in 1965 Reader's Digest and RCA started cooperation in order to create a machine for reading documents that used OCR to digitize the serial numbers of Reader's Digest coupons, returned from ads. For printing on documents with drum printer RCA used a special OCR-A font. Machine for reading documents worked directly with PC RCA 301 (one of the first massive computers). Machine operation speed was 1500 documents per minute: it reviewed each document, excluding those that it was not able to process correctly.

Since 1965 U.S. Postal Service has been using mail sorting machines, working on the principle of optical character recognition, based on technologies developed by researcher Jacob Rabinow.

The first European organization that used machines with optical character recognition, was British Post Office. Canadian Post applies optical character recognition systems since 1971. At the first stage in a sorting center, optical character recognition systems read the name and address of recipient, and print the barcode on the envelope. It is applied with a special ink that is clearly visible in ultraviolet light. The reason is to avoid confusion with the address filled by person, which can be in any place of envelope.

In 1974, Ray Kurzweil created Kurzweil Computer Products company, and began to work on the development of the first optical character recognition system, capable to identify text printed in any font. He believed that the best application of this technology is creation of reading machine for the blind, which would allow blind people to have a computer that can read text aloud. This device required two inventions: CCD flatbed scanner and text-to-speech synthesizer. The final product was introduced in January, 13 1976, during a press conference headed by Kurzweil and leaders of the National Federation of the Blind.

In 1978, Kurzweil Computer Products began selling a commercial version of the optical character recognition computer program. Two years

later he sold his own company to Xerox Corporation, which was interested in further commercializing character recognition systems. Kurzweil Computer Products became a subsidiary of Xerox, known as Skansoft.

3.3. OCR technology

Exact recognition of Latin characters in printed text for today is possible only if the available clear images, such as scanning printed documents. Accuracy with this problem setting is more than 99 %, the absolute accuracy can only be achieved by further human editing. The problem of handwritten "printed and standard handwritten" recognition as well as printed texts of other formats (especially with huge number of characters) is today's subject of active researches. Methods' work accuracy can be measured in several ways, and therefore it is possible its considerable variation. For example, if you found a specialized word which is not used for appropriate software when searching for non-existent words, the error might increase.

Online character recognition is sometimes confused with optical character recognition. The last is offline method working with static form of text presentation, whereas online character recognition takes into account printing movements. For example, in online recognition, which uses PenPoint OS or a tablet PC, it can be defined, from which side a line is being written: from right to left or from left to right.

Online handwriting character recognition systems "on the fly" recently became widely known as commercial products. Algorithms for such devices use the fact that individual plots speed and direction of input lines are known. Besides, user learns to employ only specific forms of printing.

These methods cannot be used in software, which uses scanning paper documents, so the problem of handwriting "printing text" recognition still remains open. On the images with handwritten "printing text" without artifacts can be achieved 80–90 % accuracy, but the image will be converted with dozens errors on the page. This technology can be useful only in too limited number of applications.

Another widely researched problem is handwritten character recognition. As for today, the achieved accuracy is even lower than for handwritten "printing text". Higher efficiency can only be achieved with the use of context and grammatical information. For example, in recognition process searching for whole words in the dictionary is easier than trying to analyze individual characters from a text. Language grammar knowledge in a language can also help determine whether a word is verb or noun. Separate hand-printed character forms sometimes have a lack of information to accurately (over 98 %) recognize all handwritten text.





To solve more complex problems in the recognition area people use, as a rule, intellectual systems of recognition, such as artificial neural networks. Today, demo versions of programs that recognize "blurred image" are already available for testing (<http://ocrai.narod.ru/demooocr.htm>).

3.4. Recognition programs

Name	License	Operating systems	Notes
Exper Vision Type Reader & RTK	Commercial	Windows, Mac OS X, Unix, Linux, OS/2	Received high marks at the beginning of 1990s
ABBYY FineReader	Commercial own	Windows; Linux, Mac OS (not for end-use customer)	Work with different languages needs appropriate language support
OmniPage	Commercial (Nuance EULA)	Windows, Mac OS	Production of Nuance Communications
Readiris	Commercial	Windows, Mac OS	Production of Belgian company I.R.I.S. Group. Contains regional packages for Asian languages and languages of the Middle East recognition
Persian Reader	Commercial	Windows	Specializes in Persian language (Farsi)
Kirtas Technologies Arabic OCR	Commercial	Windows	Can recognize Arab and English characters on one page
Zonal OCR	Commercial	Windows	Zonal OCR helps automatize extracting data from computer images
ViewWise by Computhink company	Commercial	Windows	Document management system
CuneiForm	BSD	Windows (with GUI), Linux, Mac OS, FreeBSD (CLI)	Distributing multilingual system, can save text formatting and recognizes complicated open texture tables
GOOCR	GPL	Cross-platform	Initial stage of development
Microsoft Office Document Imaging	Commercial	Windows, Mac OS X	
Microsoft Office OneNote 2007	Commercial	Windows	

Information Technologies in Translation

Name	License	Operating systems	Notes
NovoDynamics VERUS	Commercial		Specializing in the Middle East languages
Ocrad	GPL	Unix-like, OS/2	
Brainware	Commercial	Windows	Extract data from documents and their processing – for example, bills, notices, invoices and card payments
HOCR	GPL	Linux	Hebrew texts recognizing
OCROPUS	Apache	Linux	Expandable recognition system which can use Tesseract
ReadSoft	Commercial	Windows	Scanning, recognition and classification of business papers, such as contracts, invoices and payment orders
RelayFax Network Fax Manager, Alt-N Technologies company	Commercial	Windows	Multilingual system, applied to convert faxes in editable document formats (doc, pdf, etc.)
Scantron Cognition	Commercial	Windows	Work with different languages needs appropriate language support
SILVERCODERS OCR Server	Commercial	Linux	Server multilingual system, has high recognition quality, can save text formatting, recognizes complicated open texture tables
SimpleOCR	Freeware and commercial version	Windows	
SmartScore	Commercial	Windows, Mac OS	For musical notation recognition
Tesseract	Apache	Windows, Mac OS X, Linux, OS/2	is developing by Google
WeOCR	MIT/X Consortium	Interface: Browser; Server: POSIX, Unix	Platform for browser-based recognition systems. Project page: WeOCR
FreeOCR	Apache	Interface: Browser; Server: POSIX, Unix	Platform for browser-based recognition systems. Uses Tesseract. Large number of supported languages. Project page: WeOCR

Name 	License 	Operating systems 	Notes 
img2txt	Commercial private	Interface: Browser; Server: POSIX, Linux	Online OCR – service which allows you to recognize multilingual text from a scanned document or picture. Converts result into editable formats (RTF, TXT, HTML)
FineReader Online.ru	Commercial	Interface: Browser	Online OCR service that allows you to recognize multilingual text from a scanned document or photo. Coverts result into editable formats (PDF, PDF/A, DOC, RTF, XLS, TXT). Until today, one can recognize free 10 pages per day
OnlineOCR.ru	Commercial	Interface: Browser	Online OCR – service which allows you to recognize multilingual text from a scanned document or picture. Converts result into editable formats (PDF, DOC, XLS, TXT, HTML)
NewOCR.com	Commercial	Interface: Browser	Online OCR – service which allows you to recognize multilingual text from a scanned document or picture. Supports 29 languages (Bulgarian, Catalan, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Indonesian, Italian, Latvian, Lithuanian, Norwegian, Polish, Portuguese, Romanian, Russian, Serbian, Slovak, Slovenian, Spanish, Swedish, Tagalog, Turkish, Ukrainian, Vietnamese) and recognizes formatted into several columns text

Information Technologies in Translation

Name	License	Operating systems	Notes
COCR2	Free	Windows 9X, ME, 2000, XP	Program for recognition of simplified and traditional Chinese characters. The primary constraint: for each character user should individually choose the option of recognition with mouse or keyboard. The number of recognizable characters is quite large – more than 10 000
RasterID	Commercial	Windows 9X, ME, 2000, XP, Vista, Win7	Program which allows you to scan and manipulate bitmaps, as well as to automate scanned images registration in an archive or in document records system. Allows you to recognize data from stamp – title blocks – and database them. Developer page: CSoft
CrystalOCR	Commercial	Windows 9X, ME, 2000, XP, Vista, Win7	Modern running OCR system. Developed by Nicomsoft

3.5. Comprehension Questions

1. Optical character recognition system defining.
2. What is the use of optical character recognition system?
3. What OCR system is allowed to do?
4. History of optical character recognition system development.
5. OCR technology.
6. Recognition programs.

IV. ELECTRONIC DICTIONARIES

4.1. The definition of electronic dictionary

Electronic dictionary is a dictionary in computer or in other electronic device.

Electronic dictionary consists of two parts: software-shell and vocabulary database.

Allows a user to find quickly the word, often taking into account morphology and ability to search phrases (examples of usage), and also with an ability to change translation direction (for example, English-Ukrainian or Ukrainian-English).

Electronic dictionary is internally arranged as a database with dictionary entries.

Electronic dictionary is a dictionary, which exists only in digital form and can be accessed through a number of different information tools. Electronic dictionaries can have various forms, including:

- removables devices
- an application installed on a phone and laptop computers, or computer programs
- built-in an electronic book function
- CD-ROM and DVD-ROM, usually going as a supplement to printed dictionary for installing on the user's computer
- free or paid online product

Most types of dictionaries are available in electronic form. These include the following:

- explanatory and bilingual dictionaries with general purpose,
- historical dictionaries, such as Oxford English Dictionary,
- monolingual dictionaries for learners,
- specialized dictionaries of all types, such as medical or legal dictionaries,
- thesaurus,
- phrase-books,
- dictionaries of idioms,
- advice on pronunciation.

Most of early electronic dictionaries were, in fact, printed dictionaries, which became available in digital form: the content was identical, but

electronic publishers gave user an opportunity to more powerful search function. But soon the possibilities provided by digital MEDIA turned to be exploited.

Two obvious advantages are that, firstly, the limited space (and the need to optimize its usage) becomes less relevant, thus additional information volume can be given, and secondly, appears the possibility of information including that is presented in a multimedia format, such as audio pronunciation and video clips.

Electronic databases, especially those included in the dictionary software are often large and can contain up to 500 000 capital words and definitions, verbs conjugation tables, as well as help section on grammar. Bilingual electronic dictionaries and inflectional language dictionaries often include interactive verb conjugations, and able to take into account morphological structure of words and lemmatization (the process of bringing a word form to **lemma** – normal (dictionary) form).

Publishers and developers of electronic dictionaries may offer content/ definitions based on their native language with their lexicographers, licensed data from printed publications, or both option, as in the case of Babylon dictionary, which offers very good definition from Merriam Webster, Ultralingua, which offers additional information about word explanations from Collins, Masson, Simon & Schuster, Paragon Software offers original explanation from Duden, Harrap, Britannica, Merriam-Webster and Oxford Dictionary.

Writing systems

Along with Latin, electronic dictionaries also support logographic font and enter text from right to left, including Arabic, Persian, Chinese, Devanagari, Greek, Hebrew, Japanese, Korean, Cyrillic and Thai language.

Dictionary software

Electronic dictionaries software usually greatly exceeds the volume of information in printed dictionaries. Many publishers of traditional printed dictionaries, such as Collins-Reverso, OED-Oxford English Dictionary, Duden, American Heritage, and Hachette, offered their resources for use on desktops/PCs and laptops. These programs can be downloaded to computers or can be purchased and installed from CD. Other dictionary software is available in specialized electronic publishing houses, such as iFinger, ABBYY Lingvo, Collins-Ultralingua, mobile systems and Paragon Software. Some electronic dictionaries provide online discussion forum that is moderated by software developers and lexicographers

Electronic translators (PEDs)

Electronic translators, also known as "pocket electronic dictionaries", or PEDs, resemble miniature clamshell (flip) of laptops/notebooks, such as Nokia communicators, complete with a full keyboard and LCD (liquid-crystal display) screens. In order to be fully portable these dictionaries work on batteries and their case made of durable material. Despite the fact that they are produced all over the world, pocket dictionaries are especially popular in Japan, Korea, China and neighboring countries, where they are optional dictionaries for many users who learn English as second language.

Some functions of electronic translators include:

- 1) animation,
- 2) voice output,
- 3) handwritten entering recognition for kanji (Chinese characters used in Japanese writing) and kana (Japanese syllabic writing, part of Japanese writing system),
- 4) language learning programs,
- 5) calculator, PDA (Personal Digital Assistan) – as organizer,
- 6) encyclopedia
- 7) time zone,
- 8) currecy converters,
- 9) crossword puzzle solvers.

Dictionaries containing data for multiple languages can have "skip" or "custom search" function that enables users moving between dictionaries when searching for words and reverse translation, which allows you to continue word searching, appears in results. Many developers produce electronic translators that use licensed vocabulary, where used such databases as Merriam Webster dictionary and thesaurus, while others can use their own database from their own lexicographers. Many devices can be extended for multiple languages, if buying extra memory cards. AlfaLink, Atre, Besta, Casio, Canon, Instant Dict, Ectaco, Franklin, Iriver, Lingo, Maliang Cyber Technology, Compagnia Lingua Ltd., Nurian, Seiko, Sharp are among the developers.

Mobile devices dictionaries

Dictionaries of all types are available as apps for smartphones and tablets, such as Apple iPad, BlackBerry PlayBook and Motorola Xoom. Especially satisfied the requirements of translators and language learners by providing apps for bilingual dictionaries of many language pairs, and for most of the well-known monolingual dictionaries for the learners, such as Longman Modern English Dictionary and Macmillan English Dictionary.

Online dictionaries

There are several types of online dictionaries, including:

- **aggregator-sites** which allow access to licensed data of different information publishers. As a rule, they offer explanatory and bilingual dictionaries, one or more thesauruses, as well as technical or specialized dictionaries, for example TheFree-Dictionary.com and Dictionary.com

- **«Premium» dictionaries** available for subscription, such as Oxford English Dictionary

- **Single publisher dictionaries** free to users and supported by advertising, e.g. Collins online dictionary, Duden Online, Larousse bilingual dictionaries, Macmillan English Dictionary, and the dictionary for those who learn Merriam-Webster language.

- **Free dictionaries from non-commercial publishers** (often the public financing institutions), for example Woordenboek Algemeen Nederlands and Den Danske Ordbog.

Some online-dictionaries are regularly updated according to language changes. Many of them have additional information, such as blogs and information about new words. Some of them are shared projects, first, Wiktionary and Collins online dictionary. And some, such as Urban Dictionary, consist of records (sometimes contradictory) provided by users. Many dictionaries have a special purpose, such as dictionaries of professional lexicon and trading terminology, regional dialects and sub-dialects, published on web-sites of organizations and individuals. Although they often can be presented as a list without searching through the tool, with the help of which information is stored and transmitted, however, they are electronic dictionaries.

- **PROMT-online-translator**. Provides a quick translation of texts, web-pages and e-mail into English, German, French, Spanish, Italian and Russian languages; (www.translate.ru)

- **Yandex dictionaries – online dictionaries**. Available translation of words into English, German, French, Italian and Spanish, and search in encyclopedias, reference books, dictionaries of Russian language, etc.; (www.enc.yandex.ru)

- **Rambler dictionaries**. Search by word: English-Russian, Russian-English, German-Russian and Russian-German dictionaries; (<http://www.rambler.ru/dict/>)

- **Lingvo-Online dictionary**. Dictionary ABBYY Lingvo online version (English-Russian and Russian-English Dictionary: general dictionary, economic dictionary, dictionary of computing and scientific terminology, synonym dictionary of Russian language). ABBYY Lingvo виконує пошук по всім словникам; (<http://www.ingvo.ru/lingvo/>)

- **OneLook Dictionaries** – search in online-dictionaries; (<http://www.onelook.com>)

– **Langtolang – multilingual dictionary.** Languages: English, French, Russian, Italian, German, Turkish, Spanish; (www.langtolang.com).

Review

There are differences in hardware quality (portable devices), in software (presentation and efficiency), as well as in dictionaries content. Some pocket PCs have a more solid construction than the others. Keyboard or touch screen input systems should be physically compared before buying. Information about GUI (graphical user interface) of software that includes electronic dictionaries from the complex and random, to clear and easy-to-use with selected user preferences, including font size and color.

The main criterion is the lexical database quality. Dictionaries aimed at group and professional use usually include all or almost all of the underlying lexical information that can be expected in high-quality printed dictionaries. The content of electronic dictionaries developed in cooperation with leading publishers of printed dictionaries are more reliable than those aimed at travelers or ordinary users, while bilingual dictionaries, not authorized by lexicographers group – by each native speaker, will not be suitable for studying. Some developers prefer to have their products evaluated by an independent academic body, such as CALICO (The Computer Assisted Language Instruction Consortium).

Another important factor is that most devices and dictionaries in them are usually aimed at specific use. For example, almost all portable Japanese-English electronic dictionaries are targeted at people with free native Japanese who study and use English. Thus, Japanese words, which usually do not include furigana (assistance in Japanese reading to indicate the correct pronunciation), interpreting pronunciation, because it is meant that the reader is literate in Japanese language (however, header words in articles have pronunciation). In addition, the primary way of search is a search by pronunciation, which complicates searching words with undefined pronunciation (for example, to search for the word "vseosiazhnyi" directly, it would be known that it is spelled *moura*). However, Japanese higher level dictionaries include character recognition, so that users (whether they are native Japanese speakers or not) can search for words with characters spelling.

Similar limitations exist in most bi- or multilingual dictionaries. These limitations may especially undermine when have a different font or alphabet in written form of a language. It is important to find a dictionary optimized for native language of the user.

Integrated technology

Several system developers that develop software for electronic dictionaries offer API (Application Programming Interface) and SDK

(Software Development Kit) – Software Development Kit for adding to programs the variety of language functions (dictionaries, translations, definitions, synonyms, spell and grammar check) and web-services, such as the AJAX interface (abbreviation of Asynchronous JavaScript and XML (Extensible Markup Language) used by Google. These apps manipulate language in different ways, providing dictionary/translation functions and sophisticated solutions with semantic search. They are often available as an app to software support of C ++ API, XML – RPC (Extensible Markup Language Remote Procedure Call) Server (Remote Procedure Call (RPC) protocol, which uses XML to encode its calls), NET API, or Python (programming language) API for many operating systems (Mac, Windows, Linux, etc.) and the developing environment. Also, these applications can be used for indexing other kinds of data.

Comprehension Questions

1. Give the definition of "electronic dictionary" and name the forms, in which they can be represented.
2. Name the dictionary types available electronically.
3. Name the advantages of electronic dictionaries over the printed ones.
4. Give the characteristic of electronic dictionaries writing system and their software.
5. Give the characteristics of electronic translators, or PEDs and name their functions.
6. Mobile devices dictionaries. Kinds of online dictionaries.
7. Describe factors/criteria for evaluation of electronic dictionaries.
8. Give an explanation of integrated technology.

4.2. Classification of electronic dictionaries by their basic technical and operational characteristics

All ED can be divided according to the following criteria:

1. *operating system that is used.* The most simple electronic dictionaries (DIC) run under MS-DOS operating system, starting from version 2.21 and 3.30, that allows using them on any IBM-connected personal computers. The most complicated multiwindow and multipurpose ED, which allow connecting different thematic databases in one shell, run under WINDOWS 3.11, WINDOWS NT, WINDOWS 95, etc.. Naturally, their successful functioning requires a more powerful computer (such as AT-486DX) with operative memory not less than 8 MB.

2. *Way of download.* Can be divided into *transient* and *resident programs*.

First include the most basic programs (for example, word-for-word dictionaries (DIC) working only in their own environment and not invoked by other shells, such as text editors. In most cases, they function in automatic ("packet") translation mode.

The other load their kernel in the computer memory (for example "LINGVO") and can be invoked at any moment of work, e.g. from any text editor using the keyboard shortcut – the operational running keys. These dictionaries provide work of translator interactively.

3. *Number of connecting dictionary databases (dictionaries).* Earlier versions of ED were allowed to connect only one vocabulary. Modern programs, such as "LINGVO electronic dictionaries system", regardless of which OS they are running, allow you to connect up to several dozens of dictionary databases and set priority of the last.

4. *Vocabulary database extension capabilities.* Outdated Ed had no ability to expand the dictionary databases by user. Modern versions, for example, starting from LINGVO 4.6 and later, have special utilities for creating and extending dictionaries by user.

5. *Translation mode.* One can highlight two main translation modes:

- 1) automatic packet (interlinear);
- 2) interactive ("request-response").

In the first case, program is run with the name of text file, necessary to translate, or masks for the whole group of text files intended to be translated. (The term "file/directory name mask" can include not only the name of a file/directory, but also its relative pathname (counting from the initial directory).

Then automatically, without a translator, goes direct translation of separate word with output on the screen or printing device newly translated words or original text, with meaning in Russian/Ukrainian language under each translated word; those not found in ED words, usually marked with "?". This mode is called **interlinear**. Dictionary databases of similar ED are limited, the quality of translation leaves much to be desired. Similar software products are unlikely to help a professional translator.

In other case, the program works in this way. After downloading program resident part in operating memory, user when working, for example, in text editor or directly in dictionary shell, enters an unknown word in original language, and then having selecting it, often using the mouse, by pressing keyboard shortcut, activates ED, which replaces original text by Ukrainian translation. Translation access time is about 0.2 seconds, which significantly speeds up the work. Such electronic dictionaries, regarding possibility of extension, and simultaneous connection of several vocabulary bases, can greatly facilitate and speed up the work of translator at any professional level.

4.3. Popular electronic dictionaries and programs

Electronic dictionaries:

- Free On-line Dictionary of putting;
- FreeDict;
- Jargon file;
- WordNet.

Programs:

- GoldenDict;
- StarDict.

Programs, websites, etc:

1. ABBYY Lingvo;
2. DICT – network protocol;
3. Multitran;
4. Polyglossum;
5. MultiLex – Russian-English, German, French, Spanish, Italian, Portuguese and multilingual dictionaries. Include definition dictionaries and thematic dictionary databases for special lexicon translation.

ABBYY Lingvo is among the most popular electronic dictionaries (programs).

ABBYY Lingvo x3. English version

It is the most full and modern electronic today's dictionary. Gives an ability to translate accurately any word. Dictionary articles contain transcription, meaning, synonyms, antonyms and grammar comments. Given examples of word usage. Lingvo can help in learning language, it contains grammar guide, record library, a special application for words overlearning – Lingvo Tutor. Words accentuation.

ABBYY Lingvo x3. European version

European version includes 130 General and topical dictionaries for translation from English, German, French, Spanish, Italian and Portuguese into Russian and vice versa, also English dictionaries (Oxford and Collins) and Russian (Yefremova T. F. dictionary).

In addition to dictionaries, the program includes:

- Phrasebooks for 5 languages with voiced phrases;
- Grammatical dictionary of the English language;
- Students dictionaries: "Difficulties of the German language" and "Collins Cobuild";

- Voiced by native speakers words: 15 000 English, 10 000 German, 5 000 French, 10 000 Spanish and 20 000 Russian words
- Application for efficient words overlearning Lingvo Tutor.

4.4. Online electronic dictionaries

Translators:

– PROMPT – online translators. Efficient translation of texts, web pages and e-mail for English, German, French, Spanish, Italian and Russian languages (www.translate.ru).

– Yandex-dictionaries – online dictionaries. Words translation: English, German, French, Italian and Spanish dictionaries. Search in encyclopedias, reference books, dictionaries of Russian language, etc. (www.enc.yandex.ru).

– Rumbler-dictionaries. Word search system in English-Russian, Russian-English, German-Russian and Russian-German dictionaries <http://www.rambler.ru/dict/>.

– Lingvo-Online – online dictionary. Version of ABBYY Lingvo online dictionaries (English-Russian and Russian-English dictionaries: general, economic, computer, scientific and Russian-language thesaurus). Search in all dictionaries (<http://www.lingvo.ru/lingvo/>).

– OneLook Dictionaries – search in online dictionaries. Aggregated search form of word explanations in explanatory and translators online dictionaries of various languages: general, business, technical, medical, etc. (in English) (<http://www.onelook.com>).

– Langtolang – multilingual dictionary. Form of translation: English, French, Russian, Italian, German, Turkish, Spanish (www.langtolang.com).

4.5. Comprehension Questions

1. The definition of electronic dictionary
2. Parts of electronic dictionary.
3. Classification of electronic dictionaries.
4. Online electronic dictionaries.
5. Popular ED.

V. MACHINE TRANSLATION

5.1. Machine translation, history of machine translation

Machine translation – translation process (writing, ideally – and oral) from one language into another using a special computer program. The same name has the scientific research direction connected with those systems construction.

History of machine translation

The idea to use ECM for translation was expressed in United States in 1947, immediately after the appearance of the first ECMs. The first public demonstration of machine translation (so called Georgetown experiment) was held in 1954. Despite the primitiveness of the system (the dictionary consists of 250 words, grammar –of 6 rules, translation of a few simple phrases), the experiment took a wide resonance: researches began in England, Bulgaria, GDR, Italy, China, France, FRG, Japan and in other countries; in 1954 – in USSR.

By the mid-1960s in United States two Russian-English translation systems were given for practical use:

- MARK (at Foreign Technology Division USAF);
- GAT (development of Georgetown University, used at Oak Ridge National Laboratory of nuclear-power engineering and at European Atomic Energy Council center in Ispra, Italy).

However, established to evaluate similar systems ALPAC concluded that low quality of machine translated texts makes this activity in conditions of United States unprofitable. Although the committee still kept recommending to continue and deepen theoretical developments, in general, its results led to pessimism growth, reduced financing, and, which was more often – to fully stop of this branch investigations.

Although, in some countries the researches continued, due to constant progress of computer technology. A quite significant factor was the appearance of mini-and personal computers, and then – more complex dictionary, search and similar systems, oriented to work with natural language data. Translation was becoming urgent taking into account the growth of international relations. All of this has led to the new rise in this area, which started from about the mid – 1970s. 1980s was a time for

widely practical use of translation systems, so that was formed the market of commercial developments on this subject.

1990s brought a rapid development of PC market (from desktop to handheld) and information technologies, widespread use of Internet (which is becoming more international and multilingual). All this made possible, and what is important – in-demand, the further growth of MT systems. New technologies appear, based on the use of neural networks, the concept of connectionism and statistical methods.

Today, dozens of companies engaged in developing commercial MT systems, and specifically: Systran, IBM, L&H (Lernout & Hauspie), Language Engineering Corporation, Transparent Language, Nova Incorporated, Trident Software, Atril, Trados, Caterpillar Co., LingoWare; Ata Software; Lingvistica b.v. and others.

Now it is possible to use an automatic translators directly on the Internet: www.alphaworks.ibm.com/aw.nsf/html/mt; <http://www.freetranslation.com/>; <http://www.translate.ru/>; www.logomedia.net/text.asp; www.foreignword.com/Tools/transnow.htm; babelfish.altavista.com/translate.dyn; infinet.reverso.net/traduire.asp; <http://www.t-mail.com/>.

Since the early 1990s home developers emerged on PC systems marketplace. In July, 1990, the first Russian commercial machine translation system called PROMT (PROgrammer's Machine Translation) was represented on the PC Forum exhibition in Moscow. In 1991 was founded ZAT "PROject MT", and, in 1992, "PROMT" company won NASA competition for MT systems supply (PROMT was the only one non-American company in this competition).

In 1992, "PROMT" produced a whole family of systems under the new name STYLUS for translation from English, German, French, Italian and Spanish languages into Russian and from Russian into English, then in 1993, was created the world's first MT system for Windows based on STYLUS. In 1994, was released version of STYLUS 2.0 for Windows 3.X/95/NT, and in 1995-1996 was presented the third generation of machine translation systems, fully 32-bit STYLUS 3.0 for Windows 95/NT, at the same time was successfully completed the development of completely new, the world's first Russian-German and Russian-French MT system.

In 1997 was signed a deal with French firm Softissimo about creating translation systems from French into German and English, and vice versa, and in December, that year was released the first world system of German-French translation. In the same year "PROMT" company released the system on the "Gigant" technology – for support multiple language directions in one shell, and a peculiar translator for work on the Internet WebTranSite. In 1998 was produced the whole set of programs under the

new name PROMT 98. One year later "PROMT" company released two new products: unique software package for work on the Internet – PROMT Internet and translator for corporate e-mail systems –PROMT Mail Translator. For corporate clients were developed special server solutions – PROMT Translation Server (PTS) and Internet solutions PROMT Internet Translation Server (PITS). In 2000, "PROMT" called up the whole line of software products, having released MT-system of new generation: PROMT Translation Office 2000, PROMT Internet 2000 and Magic Gooddy 2000.

Online translation with "PROMT" system support is used by a number of home and foreign sites: <http://www.translate.ru/>, infinet.reverso.net/traduire.asp, etc.

Software of "PROMT" company won a number of domestic and foreign awards.

For machine translation a special program is entered in a computer that implements translation algorithm, which means the sequence of uniquely and strictly certain actions over a text for finding translation correspondences in given pair of languages L1-L2 in the specified translation direction (from one specific language into another).

5.2. Forms of interaction organization between ECM and human in the process of machine translation

Forms of interaction organization between ECM and human in the process of machine translation include the following:

- with post-editing: original text is processed with machine, and human-editor corrects the result;
- with pre-editing: human adapts text to machine processing (eliminates the possible ambiguous readings, makes the text easier and formatted), and then starts program processing;
- with inter-editing: human intervenes in the translation system working, allowing complicated cases;
- mixed systems (for example, with simultaneous pre-and post-editing).

5.3. Machine translation system

Machine translation system includes:

1. Bilingual dictionaries with necessary grammatical information (morphological, syntactical, semantic) to ensure the transfer of equivalent, optional and transformational translation correspondences.
2. Algorithmic tools of grammatical analysis realizing any of the accepted formal grammars for automatic text processing. There are also separate machine translation systems, aimed at translation in the framework of three or more languages.

5.4. Algorithm of machine translation process

1. At the first stage is carried out by entering text and searching incoming word forms (words in a specific grammatical form, such as dative ablative plural) in the input dictionary (source language dictionary) with an accompanying morphological analysis, which set the affiliation of a given word in a certain lexical unit (words as units of a dictionary). In the process of analysis word form can also give an information belonging to the other levels of language system organization.

2. The next stage includes:

a) translation of idiomatic phrases, unity, phraseologies or stamps of a given vivid area (for example, while English-Ukrainian translation such phrases as in case, in accordance with receive single digital equivalent and are excluded from further grammatical analysis);

b) definition of basic grammatical (morphological, syntactic, semantic and lexical) characteristics of a source text elements (for example, the number of nouns, verb tense, syntactical functions of word forms in the text, etc.) that is carried out within a source language;

c) homography solution (conversion word forms homonymy – for example, engl. *round* can be a noun, an adjective, an adverb, a verb or a preposition);

d) lexical analysis and lexemes translation. Usually at this point, monosemantic words are separated from polysemantic (having more than one equivalent in the target language), after which monosemantic words are translated by the equivalents lists, and for polysemantic words translation are used so-called contextual dictionaries, dictionary articles, which are context request algorithms for the presence/absence of contextual meaning markers.

3. Final grammatical analysis, which specifies the necessary grammatical information taking into account target language data (for example, Ukrainian nouns such as "ковзани", "ножиці" should be followed by verb in plural, despite the fact that original may be also singular).

4. Synthesis of target word forms and sentence as a whole in a target language.

Depending on the features of morphology, syntax and semantics of a particular language pair, as well as translation direction, the general translation algorithm may include other stages, and the modification of these stages or their passing order, but variations of this kind in modern systems are usually minor. Analysis and synthesis can be carried out as in few stages, as for all text entered into computer memory; in the last case the translation algorithm provides the definition of so-called anaphoric relations (for example, pronoun-noun relation with a noun replacing "them" – let's say pronoun *them* with the word *pronoun* in this parentheses explanation).

Current machine translation systems are oriented to specific language pairs (e.g., French and Ukrainian or Japanese and English) and use normally translated matches either on a superficial level or on some intermediate level between source and target language.

5.5. Machine translation quality

Machine translation quality depends on a subject and style of an original text, as well as on grammatical, syntactic and lexical similarity of languages, between which the translation is performed. Machine translation of belles-lettres style texts almost always turns out to be of unsatisfactory quality.

However, technical documents with specialized computer dictionaries and some system settings on features of any particular type of texts, might obtain translation of acceptable quality, which requires only a slight editorial correction. The more formalized style of the original document is, the greater quality of translation could be expected. The best machine translation results can be achieved for texts written in technical (various descriptions and user tips) and official styles.

Machine translation quality depends on:

- 1) dictionary volume;
- 2) scope of information about given lexical units;
- 3) accurate preparing and checking of analysis and synthesis algorithms;
- 4) software efficiency.

Modern hard- and software allow use of large volume dictionaries containing detailed grammatical information. Information can be represented as in declarative (descriptive), as in procedural (which considers the needs of an algorithm) form.

5.5.1. Improving machine translation quality

1. Before beginning translation, you need to determine:

- 1) purpose of translation results use;
- 2) what is the original text.

Purpose of translation plays a vital role in assessing its quality. The same result can be considered an excellent, if you just need to know what is the original article about, and completely worthless, if you want to present text for publication in a book or magazine. But sometimes even "the roughest translation" turns to be acceptable, if it has enough information, with the help of which experts in the relevant field can easily recover the meaning of text.

On the other hand, having determined which style the original text belongs to, it is easy to assess its suitability for machine translation. The

more constructions, allegories, metaphors has the text, the more free style is, than the worse computer translates it.

Better than others are handled scientific, technical and educational texts, which have a strict narrative. If special dictionaries are promptly replenished with new terms, you can get a fully coherent translation of texts that require minimal stylistic corrections.

Conversational and publicistic style, which have many constructions, but most of words are used in their direct meaning, fit for draft translation, but getting a competent target text requires manual edit. Poetry and fiction are absolutely insufficient for machine translation. Meaning of the text based on expressions and allegories within machine translation is distorted, and its content is not available even for information.

2. Before starting translation you need to check source text for misprints.

Very often misprints in the original cause incorrect translation. This especially include scanned and recognized texts. Words with spelling errors in most cases are marked by the system as unknown. If a misprint converts one word to another, which also exists in a foreign language, the program translates it, but the text content will be distorted. Punctuation errors are among serious problems. One improper comma can significantly distort translation of a sentence.

3. You need to find and add special dictionaries concerning the subject of being translated text.

If there is no exact subject, you need to determine the most appropriate combination of available dictionaries and certainly to create your own. Perfect if each text has its own dictionary. The best efficient option is to fall most common subjects into items.

For example, within the computer sphere there can be created the following dictionaries: ‘Office applications’, ‘Graphics’, ‘Nets’, ‘Internet and WWW’ etc.

4. There shall be organized top-down hierarchy of dictionaries.

If there are few dictionaries in the system, successful translation will depend on the order, in which the program searches the necessary word. The highest priority should be given to the dictionary, that was created for the current text, then there will be thematic dictionaries (in the order of subject matter expansion), and the lowest degree is for general dictionaries. For example, while translating a text about Adobe Photoshop program, it’s better to put ‘Photoshop’ dictionary (created exactly for this text) on the first place, then – ‘Computer graphics’, ‘Informatics’ and on the last place – general dictionary.

5. There is no need in translating the whole text at once.

Always there will be at least one or two words, that are absent in dictionaries, and a huge amount of words, that are translated wrongly by the system. After involving all dictionaries and analyzing other translation options, there should be translated one little part at the beginning of the text, for example, first paragraph, and then words, which weren't translated properly, should be put into the dictionary of the highest level. Then this part should be translated once again. If the result is satisfactory, translator starts working on the next paragraph. On practice, accurate system setting demands translation of one fourth, and sometimes even one third, amount of the material in the way given above, and only then start automatic text processing.

6. It is important to distinguish general and particular.

Before adding a new word to user's dictionary, it should be checked, whether it will be translated in the same context only for a few times or constantly. The ability to work properly with machine translation system is based on differentiation of general and private. Ideally, a translator must have great language skills and knowledge on subject matter of the text. Only those words are recommended to add to the dictionary, that occur systematically, single variants are for manual correction. Otherwise a word will be translated wrongly in the whole text.

Following of the rules above help enhance the quality of machine translated texts. There is no guarantee, that there will always be absolutely right and stylistically adequate. But the first aim – understand the meaning of the text – will be achieved.

There is a need to distinguish machine translation and translation with the help of special computer programs. In the last case there is the issue of the automatic dictionary, that helps user to find necessary translation equivalent. Though in both variants computer works along with the human (an editor or a translator), term 'machine translation' means that most amount of work on a translating and searching for translation equivalents and concordances are made by the computer, while human only controls the process and then check the mistakes. At the same time computer dictionary is only a helpful tool for quick finding of translation concordances; but sometimes in this type of dictionaries there can be realized some functions (in limited variety), that are common to machine translation systems.

5.6. Comprehension Questions

1. Definition of machine translation.
2. History of MT.
3. Forms of organization of interaction between human and computer by the means of machine translation.

4. Algorithm phases of the MT process.
5. What does MT system include?
6. Quality of MT.
7. Difference between MT and CAT tools.

5.7. General approaches to the machine translation

In translation experience and information technology there are two main approaches to the machine translation:

1. Results of machine translation can be used for a cursory reading of a text in foreign language and understanding of its main idea.

In this case it can be used as a signal information and doesn't need accurate editing.

2. Using machine translation instead of common 'human'.

In this case text demands accurate editing and setting a translation system on a particular sphere. Here play their important role completeness of the dictionary, its orientation on the content and a set of linguistic means of translated texts, the effectiveness of solutions as to lexical ambiguity, the effectiveness of algorithms for extracting grammatical information, finding translation equivalences and synthesis algorithms. In practice, the translation of this type becomes economically profitable if the volume of translated texts is sufficient (at least several tens of thousands of pages per year), if the texts are homogeneous enough, the system dictionaries are complete and allow further expansion, and the software is convenient for posting. Such systems of machine translation are used in organizations whose needs in operational and high-quality translations are large enough.

5.8. Parameters of machine translation system

The parameters of the machine translation system must meet four basic requirements:

- efficiency;
- flexibility;
- speed;
- accuracy.

1. The efficiency of machine systems – is the ability to constantly replenish the vocabulary and create new thematic dictionaries.

In this setting, they are far ahead of various dictionaries' usual print editions.

2. Flexibility is an opportunity:

- 1) of "rough setting" to a specific sphere of knowledge (specialized dictionaries serve for this purpose);

2) of "fine setting" to a specific text, book or group of documents (modified dictionaries for the user).

3. Speed – the ability to automatically enter and process textual information from paper carriers.

4. Accuracy – stylistically and grammatically correct, adequate transmission of the value of the original text to the target language. This is the "most immediate place" of machine translation systems.

5.9. Advantages of machine translation programs

Advantages of machine translation programs (common to all MP systems in general and PROMT systems in particular):

1. High speed.

Within a few seconds they perform a translation of a multipage text. This allows user to quickly understand the meaning of the text. If the system is configured to translate texts of a specific subject, minimal editing is required.

2. Low price.

Money is paid only once – when buying a program, there are no additional costs for a full-time translator who needs to be paid a salary. According to the users of PROMT, when translating more than 50 pages of text per month, the PROMT 98 translator program pays off during the same amount of time approximately.

3. Access to the service.

The translator program is always on hand, so there is no need to go to the translation bureau, which in many cases involves extra time and effort.

4. Confidentiality.

The translator program keeps secret of any trusted text.

Collective use of MT systems in organizations provides additional benefits:

1. The uniformity of the style and terminology used. The cost of post-editing by the work of translators staff is about 100–140 % of the general cost of translation. The translation provided by the MT system is much easier to edit because it is in the same style. If a frequently encountered term is incorrectly translated through the whole text, then all these mistakes can be corrected by a simple auto-replacement. When the big text is translated by a group of translators, one has to find some inaccuracies made by each translator. The editor in this case also needs to "align" the style of translation as well.

2. Lack of formatting costs. This is especially important when translating electronic documentation. The translation program completely preserves the original formatting, which saves time and money while preparing the translation.

5.10. Statistical machine translation

Statistical machine translation is a kind of machine translation of the text, based on a comparison of large volumes of language pairs. Language pairs are texts, where proposals in one language and their corresponding equivalents on the other can be as variants of writing them by a person (who is a bearer of two languages), and a set of sentences and their translations performed by a person. Thus, statistical machine translation has the property of "self-learning." The more linguistic pairs are in the distribution and the more accurate they correspond to each other, the better will be the result of the statistical machine translation.

The term 'statistical machine translation' means the general approach to the solution of the translation problem, which is based on finding the most likely translation of the proposal using the data derived from the bilingual set of texts. As an example of a bilingual set of texts, there can be called parliamentary reports, which are protocols of debates in parliament. Bilingual parliamentary reports are issued in Canada, Hong Kong and other countries; official documents of the European Economic Community are published in 11 languages; and the United Nations also publishes documents in several languages. As it turned out, these materials are invaluable resources for statistical machine translation.

5.11. Comprehension Questions

1. Two main approaches to MT.
2. Requirements to the parameters of the machine translation system.
3. Quality of the MT and its improvement.
4. Advantages of MT programs.
5. Statistical MT.

VI. COMPUTER-AIDED TRANSLATION

6.1. Definition of computer-aided translation

Automated translation/Computer-Aided Translation (CAT) – translation of texts on a computer using computer technologies. Difference with the machine translation (MT) lies in that the entire translation process is carried out by a person, the computer only helps to translate the finished text either in less time, or with better quality. The idea of the CAT had come about since the emergence of computers: the translators have always opposed the standard MT concept in those years, to which were directed most of the researches in the field of computer linguistics, but supported the use of computers to help translators. In the 1960s, the European Coal and Steel Association (the forerunner of the modern European Union) began to create terminological databases under the general name Eurodicautom. In the Soviet Union, VINITI (All-Russian (former All-Union) Institute for Scientific and Technical Information of the Russian Academy of Sciences (former the USSR Academy of Sciences) was formed to create such databases.

In the modern form, the idea of the CAT was developed in the article by Martin Kay in 1980, who put forward the following thesis: "*Taking over what is mechanical and routine, it (computer) frees human beings for what is essentially human*" (The computer takes all the routine operations and frees a person for operations requiring human thinking).

Today, the most common means of using computers in translation are working with dictionaries and glossaries, translation memory (TM) containing examples of previously translated texts, as well as the use of so-called passages, large collections of texts on one or more languages. This gives a brief description of how words and expressions are actually used in the language as a whole or in a particular subject field.

Software localization often uses specialized tools, such as Passolo, that allow user to translate menus and messages in program resources and directly in compiled programs, as well as to test the correctness of localization. For the translation of audiovisual materials (mainly films) are used specialized tools such as Swift, which not only combine some aspects of translation memory, but also provide the ability to create subtitles in time, their formatting on the screen, compliance with video standards etc. In

simultaneous translation, the use of CAT tools is limited, if necessary. As an example – the use of dictionaries downloaded to the PDA. Another example may be the semi-automatic extraction of lists of terms in preparation for simultaneous translation in a narrow subject field.

In narrow subject areas, with a large number of source texts and well-defined terminology, translators have the ability to use machine translations, which can provide a good translation of terminology and stable expressions in a narrow field. In this case, the translator performs post-editing of the received text. More than half of the texts (mainly legal texts and current correspondence) are translated with the use of CAT.

6.2. CAT tools

CAT is a broad and not entirely accurate term, that covers a wide range of simple and complex tools. They may include:

- spell checking programs, that can be embedded in text editors or additional programs;
- grammar checking programs, that are also embedded in text editors or additional programs;
- terminology management programs, that allow translators to manage their own terminology database in electronic form. It can be a simple table created in a text editor, as well as a spreadsheet or a database created in the FileMaker Pro program. For more labor-intensive (and more expensive) solutions there is a special software such as LogiTerm, MultiTerm, SDL Trados, Termex, etc.
- dictionaries on CDs, monolingual or multilingual;
- terminological databases stored on CDs or those connected to the Internet, such as the Open Terminology Forum or TERMIUM;
- full-text search programs (or indexers), that allow the user to query requests for previously translated texts or various background documents. In the translation industry, such indexers as Naturel, ISYS Search Software and dtSearch are known;
- concordance programs, that allow user to find examples of words or expressions in the context of one-language, bilingual or multilingual body, such as the bitext or the translation memory;
- bitext – one of the innovations in recent years – is the result of the merging of the original text and its translation, which can then be analyzed using programs for full text search or concordance;
- software for project management, that allows linguists to structure complex translation projects, transfer assignments to different employees and monitor the process of performing these tasks;

- translation memory management (TMM) programs consisting of a database of segments of the text in the original language and their translations into one or more target languages;
- almost completely automatic systems resembling machine translation, but allowing the user to make certain changes in questionable cases. Sometimes such programs are called ‘machine translation with the participation of a person’.

6.3. Comprehension Questions

1. Computer-aided translation (CAT).
2. CAT tools.

VII. TRANSLATION MEMORY

7.1. Definition of the translation memory

Translation memory (TM is sometimes referred to as ‘Translation Tool’) – a database containing a set of previously translated texts. One record in such a database corresponds to a segment translation unit, for which one sentence is usually taken (rarely – part of a complex sentence or a paragraph). If the unit of translation of the original text exactly coincides with the unit of translation stored in the database (exact match), it can be automatically transferred into translation. The new segment may also be slightly different from what is stored in the database (fuzzy match). Such a segment may also be put into translation, but the translator will need to make the necessary changes.

In addition to accelerating the process of translation of fragments and changes made in translated texts (for example, new versions of software products or changes in legislation), which are repeating, TM systems also ensure the uniformity of translation of terminology in identical fragments, which is especially important in technical translation. On the other hand, if the translator regularly submits to his translation exact matches extracted from the translation bases, without controlling their use in a new context, the quality of the translated text may decrease.

In each particular system, TM data is stored in its own format (text format in Wordfast, Access database in Deja Vu), but there is an international TMX (English Translation Memory eXchange format) standard, which is based on XML and can be generated by virtually all TM systems. Due to this, the performed translations can be used in various applications, that is, the translator, who works with OmegaT can use TM created in Trados, and vice versa.

Most TM systems, at a minimum, support the creation and use of user dictionaries, the creation of new databases on the basis of parallel texts (alignment), and semi-automatic extraction of terminology from the original.

7.2. Standards and formats of TM

Among the most common standards and formats of memory of translations should be noted the following:

– TMX format (Translation Memory Exchange Format). This standard provides a mutual exchange between different translation memory providers. TMX is a commonly used format in the translators environment and suits the best for import and export of translation memory. The latest version of this format – 1.4b allows user to restore the original documents and their translation from the TMX file;

– TBX (Termbase Exchange format). This is a format, adopted by the LISA (Localization Industry Association), and is currently under revision and transposed in accordance with ISO 30042. This standard allows to exchange of terminology, including detailed lexical information. The core of the TBX is defined by the standards: ISO 12620, ISO 12200 and ISO 16642. ISO 12620 provides a register of clearly defined ‘data categories’ with standardized names, that function as types of data elements or doomed values. ISO 12200 (also known as MARTIF) provides the basis for the TBX. ISO 16642 (also known as the Terminological Markup Framework) includes a structural metamodel for terminology markup languages in general;

– SRX is designed to improve the TMX format and more efficient translation memory exchange between programs. The ability to specify segmentation rules, used in the previous translation, increases the effectiveness of segment identification in the current text with TM content;

– GMX GILT stands for Globalization, Internationalization, Localization, and Translation. The GILT Metrics standard consists of three parts: GMX-V for volume indicators, GMX-C for complexity indicators, and GMX-Q for quality metrics. The proposed GILT Metrics standard aims at quantifying the volume of work and quality requirements when implementing the GILT tasks;

– OLIF is an open standard XML-compatible, which is used to exchange terminology and lexical data. Although initially it was used as a way to exchange lexical data between private lexicon of machine translation, gradually this format turned into a more general standard of terminological exchange;

– XLIFF (XML Localization Interchange File Format), created as the only file format for mutual exchange, which is recognized by all localization providers. XLIFF is the best way for exchanging information in XML format in the modern translation industry;

– TransWS (Translation Web Services) defines the necessary calls for using web services when sending and receiving files and messages, that are relevant to localization projects. Developed as an expanded automation system for the localization process using Internet services;

– xml: tm – this approach to translation memory is based on the concept of textual memory, which allows you to combine the author's memory and memory of translations. The xml: tm format was passed to Lisa OSCAR by XML-INTL company.

7.3. TM popular program systems

According to recent surveys, the use of TM systems to the most popular systems include:

- Trados (the most popular program that has long been TM standard);
- OmegaT (freeware licensed under the GNU GPL);
- Wordfast (implemented as a macros set for MS Word, but a new version of 2009 is a separate application);
- Star Transit;
- ABBYY Aligner;
- Deja Vu;
- SDLX.

7.3.1. Wordfast

‘Wordfast’ is used for all products developed by Wordfast LLC. Originally Wordfast, now called Wordfast Classic, was developed by Yves Champollion in 1999 as a cheap and easy alternative to Trados, a well-known automated translation program of that time. Modern versions of Wordfast work on different platforms, though use compatible translation memory formats, and often have similar interfaces. The software is intended for freelance translators, although it is also suitable for corporate environments.

Wordfast LLC is based in Delaware, USA, although most of work is being produced in Paris, France. In addition, in Prague, the Czech Republic, there is a customer support center. The company employs about 50 people.

History

The developing of Wordfast Ver. 1 (called simply ‘Wordfast’ at that time) began in 1999 in Paris by Yves Champollion. This was a set of macros, that run from Microsoft Word, version 97 or higher. At that time, all automated translation programs worked from Microsoft Word, for example, Trados.

Until the end of 2002, this software (now called ‘Wordfast Classic’) was distributed free of charge. Thanks to good feedback, Wordfast became the second most commonly used program of automated translation programs among translators.

In 2006, Wordfast LLC was founded. By this time, the development of the program was conducted personally by Yves Champollion.

In January 2009, Wordfast launched Wordfast Translation Studio, that included Wordfast Classic and Wordfast Professional, a separate Java-based automated translation program. Both tools can be purchased separately as well as together in the studio.

In May 2010, Wordfast launched a free online tool named 'Wordfast Anywhere'. This tool allows translators to work on projects from any place and any device, that has access to the network. By the end of July 2010, more than 5,000 users registered in the system, and by November this number became of 10,000.

Wordfast Classic

Wordfast Classic is a collection of macros, that run from Microsoft Word 97 or higher on any platform. Some later editions only work with later versions of Microsoft Word, but the bulk of the program is still compatible with Word 97. The document translated using Wordfast Classic temporarily turns into a bilingual document (containing both original text and text on target language in separate segments), and converted to its final version using the clearing procedure. The use procedure is similar to Trados 5, WordFisher and Logoport.

The first version of Wordfast Classic was called Wordfast ver. 1, and was developed by Yves Champollion. It was presented to the public in 1999.

Second version was used by the Linguex Translation Bureau, which acquired the exclusive right to use for 9 months. During this time, Wordfast replenished with functionality such as quality control and network support. After the contract with Linguex, third version was introduced to the public as a free software with mandatory registration.

In middle 2001, software developers signed an agreement with the Logos group to expand the program under the brand name of the newly established company Champollion Wordfast Ltd. in the UK. The joint venture broke up in August of the same year after the Logos refused to share its code with the Wordfast developer, despite the fact that it itself accessed the Wordfast code by reading the developer's email. Today, Logos spreads the old version of Wordfast and claims rights for the 'Wordfast' title.

Initially, version 3 was freely distributed with mandatory registration. In October 2002, Wordfast becomes a commercial software with a three-year license for 170€ for 'rich' countries and 50€ (later 85€) for users from other countries.

Wordfast Anywhere

Wordfast Anywhere is a free Wordfast web site with a Wordfast Classic interface. It was launched in May 2010. Before the project started, it was still not clear whether this service would be free.

Despite the fact that the service is free, there are some limitations:

- No more than 10 sources at a time
- No more than one million modules per user
- No more than 100,000 modules in one file
- No more than 100,000 glossary entries per account
- Download no more than 2 MB (although files can be archived by ZIP archiver)

Wordfast Anywhere's privacy policy is such, that downloaded documents are not transmitted anywhere and are not available to anyone except the user. Users can use machine translation and public TM systems. The software can be used on tablets with Windows Mobile, Android and Palm OS. In addition, Wordfast Anywhere can be purchased in the iPhone app. Since April 2011, Wordfast Anywhere recognizes PDF files.

Wordfast Pro

Separate cross-platform software (Windows, Mac, Linux) allows user to work with all formats, as well as with batch translations (up to 20 files).

Plus tools

A set of free advanced options, that allow translators to produce advanced text manipulations.

VLTM (Very Large Translation Memory) project

Users can use public TM or create their corporate TMs to ensure the unity of the terminology used by the team.

WF Server

Secure server, that provides real-time access to translators from anywhere in the world.

Supported file formats

Wordfast Classic supports: any Microsoft Word file formats, including TXT, Word documents (DOC/DOCX), Microsoft Excel (XLS/XLSX), PowerPoint (PPT/PPTX), Rich Text Format (RTF), tagged RTF and HTML. Direct support for OpenDocument formats is not available, as current versions of Microsoft Word do not offer import tools in OpenDocument.

Wordfast Pro supports: Word documents (DOC/DOCX), Microsoft Excel (XLS/XLSX), PowerPoint (PPT / PPTX), Rich Text Format (RTF), Text (TXT), HTML, XML, ASP, JSP, Java, InDesign (INX/IDML), FrameMaker (MIF), and editable PDF. OpenDocument format support is not available.

Wordfast Anywhere supports: Word documents (DOC/DOCX), Microsoft Excel (XLS/XLSX), PowerPoint (PPT/PPTX), Rich Text Format (RTF), Text (TXT), HTML, InDesign (INX), FrameMaker (MIF), TIFF (TIF/TIFF) and editable and recognizable PDF. OpenDocument format support is not available.

Supported formats of TM and glossaries

Wordfast translation memory is a simple text file separated by tabs.

Wordfast supports multiple TMs and glossaries. TM can contain up to a million phrases, and a glossary of up to 250,000 entries each.

Wordfast supports machine translation systems (including Google Translate and Microsoft Translator).

7.3.2. Déjà Vu

Déjà Vu – a proprietary system for automated translation, developed by the Spanish company Atril Language Engineering.

Atril Language Engineering was founded in 1993. The company is engaged in the development of computer systems for the automation of the work of translators and agencies.

7.4. Comprehension Questions

1. Definition of TM.
2. Standards and formats of TM.
3. TM popular program systems.

VIII. TRANSLATION MEMORY DATABASES

8.1. General information, Unicode coding standard

Translation, performed by a translator using computerized support tools, involves the use of multilingual EDI modules and the automated management of translator's terminology databases.

At the heart of the multilingual EDI module is **the Unicode encoding standard**, which allows user to reproduce 1 112 064 characters. This means, that using the Unicode standard makes it possible to encrypt a huge number of characters in different writing systems, and in the Unicode documents without additional coding reproduces mathematical symbols, characters and letters of Latin and Greek alphabets, Cyrillic, etc. The Unicode standard is supported by the Word processor and such translation tools, as SDL TRADOS Workbench, Across, MemoQ, Déjà Vu. The user only needs to install one of the operating systems of Microsoft Corporation, buy the necessary keyboard and switch the font in the process of working on the translation.

Automated management of terminology databases opens the translator's access to them directly from the text editor, as well as copying and inserting into the text of the desired term without additional 'switching' to other windows or programs; search for a token in the dictionary or a manually-typed set on the computer keyboard. In addition, the module provides support for international formats of dates and currency.

8.2. The main function of integrated translation systems

The main function of the integrated translation systems at the translator's computer workstation is to preserve the equivalent segments of the translation from original into target language in the database, access to these segments in the process of translating of the new text and finding the exact or fuzzy matches in the existing database. Thus, the application of the integrated translation system facilitates the translation of professional texts of a particular industry, characterized by the repetition of the text material, such as technical instructions, user instructions, up-to-date product documentation and product line models, text material for users' technical support, etc. The pre-language of working with such systems is the availability of original texts in electronic form.

8.3. Basic components of integrated translation systems

At the heart of integrated translation systems are three main components:

- A) the translation-oriented text editor;
- B) terminology control components that provide the automatic search of lexical units in dictionaries;
- C) translation memory.

In a text editor, the text is output in a given format, with the preservation of structure and tags content, if any.

Any attempts to modify the structure or tags content are blocked for an interpreter. This also applies to software codes when software products are localized. The standard Word editor or other text editors provided by the software product are used as usual text editors.

Terminology management components recognize the terms, their morphological paradigm and derivatives, as well as the terms, that act in the text as constituents of the composites, and allow their search in the terminology database, and then output the search result in the form of identifiable data (Fuzzy-Match). Software products allow the words identified in the terminology database to be inserted into the translation text. These components are integrated into the program (for example, in Déjà Vu X) or are available to the user regardless of the integrated translation system (for example, Multiterm in SDL Trados or TermStar in Transit).

Some terminology management components are equipped with additional features, for example: the function of automatic terminating the registry for a particular project, the function of automatic extraction of terms from single or bilingual texts, the function of control over terminology, namely: checking the text-translation for use in it exactly the terms that are available in the terminology database.

8.4. TM component

The basis of the translation memory component is the 'Fuzzy-Match' algorithm, the key function of which is to automatically save identical segments of the original text and its translation during the process of translation, and to automatically recognize identical or similar segments when translating other texts of the type, that are displayed on the screen in the process of preliminary analysis given for the translation of the original text.

Thus, the translation memory component allows all segments of the original language of the pre-translation of the ordered material to be automatically replaced by the program with their identical or similar matches in the language of translation, found in translation memory. In this

case, the numerical units and standard symbols are automatically replaced by the program. In addition, translation memory provides the possibility of switching to machine translation systems, as well as integrates the function of creating translation memory based on the texts of finished translations and original texts ('Alignment').

Thus, the concept of translation memory of the integrated translation systems Across, Déjà Vu, MemoQ, SDL Trados, SDLX, Wordfast is based on the creation of such a database, in which articles are presented in pairs of translation segments, indicating the date of their creation, making changes, the author of the article, project coding, etc.

In the translation memory database, segments of the standard texts in the original language and the target language are stored in XML format.

8.5. Contents of integrated translation systems database

The database of integrated translation systems consists of a translation memory database and a terminology database. The first one preserves the segments of the original texts and translated texts in the form of text headings, sentences, individual syntagms, drawings or tables. In the second – terms in the form of simple words, composites or phraseological units, for example:

TM database

German language:	Eigentum, Rückgabe Alle Informationen, Verfahren, Computerprogramme, Geschäftsgeheimnisse, Kunden- und Zuliefererinformationen sowie frühe Programmstände bzw. -versionen (Alpha-/Beta-Versionen), welche der jeweils anderen Vertragspartei zugänglich gemacht werden, sind und bleiben das Eigentum der aushändigenden Vertragspartei.
Ukrainian language:	Ownership and product return According to the current agreement, all information, technologies, computer programs, trade secrets, information for customers and suppliers, as well as previous versions of the software and the Alpha- / Beta versions of software products, that have been provided to the other party are now and remain in the ownership of the party, that provided them for use by the other party.

Terminological database

German language:	Eigentum
Ukrainian language:	Ownership rights
German language:	Geschäftsgeheimnis
Ukrainian language:	A trade secret
German language:	frühe Programmstand
Ukrainian language:	Previous version of the software

The database of commercial integrated translation systems is empty and is filled in by a translator in the process of translation. First, the original text is imported into an integrated translation system and is opened for translation. Its segmentation is done automatically by the program on the basis of the parameters, given by the translator (for example, by punctuation marks or other rules) and can be adjusted in the process of working on the translation.

Segments, that are activated during the translation process, are automatically searched. If such a segment is found in translation memory, the program offers its identical or similar translation, which can be accepted automatically or after additional editing. If there is no segment in the translation memory, the translator translates it manually, and after that a couple of segments are automatically stored in translation memory and can be used in the process of working on the next project. Translation memory is gradually filled up by the translator in the process of translating projects.

In addition, the architecture of translation memory allows you to convert data into various formats, synchronize texts in the original language and the target language ('Alignment'), make an analysis of texts in the original language to look for translation equivalents, create a TM and terminology databases within a specific project, preliminary translation of identical or slightly modified original texts.

Translation memory segments ('Fuzzy Matches') are the basis for planning and calculating the cost of translation projects. It is the use of integrated translation tools, that allows firms and institutions to save money on translation, since the price for it is determined depending on the availability or absence of translation of the translation agency of the ordered material and can amount from 25 %, if the translation memory has identical texts (the price for editing), to 100 %, if it is necessary to translate the material completely. Each integrated translation system is equipped with an additional function of analysis of the original text, which automatically compares translation segments of the original text with the translation memory database and displays the result in the form of statistics, the results of which calculates the cost of translation.

The first commercial integrated translation systems were introduced in the market of linguistic technologies in the 90's of the twentieth century. Their main advantage is that the developers managed to reconcile the functioning of individual applications and combine them under one interface.

8.6. Modules of the main component of commercial integrated systems

The main component of commercial integrated systems is the **translation memory** (the so-called archive of previously translated texts), which consists of such modules as:

- a) alignment – creating a parallel body of texts;
- b) extraction of terminology;
- c) exchange of memory databases between different integrated systems;
- d) support of various data formats, electronic publishing systems and data processing;
- e) project management;
- f) linguistic – a terminology database and archive of translation.

These modern tools allow user to save on customer expenses, qualitatively and quantitatively optimize the work of the translator and free him from performing routine operations, for example, creating a layout of text-translation, copying of illustrations, re-translation, etc.

8.7. Comprehension Questions

1. The Unicode encoding standard.
2. The main function of integrated translation systems.
3. Three main components of integrated translation systems.
4. What is the basis of translation memory component?
5. What is the integrated translation systems database?
6. What modules consists the translation memory of?

IX. LINGUISTIC SOFTWARE

9.1. Types of linguistic software

Linguistic software (*lingware* = linguistic + software) – computer programs and data, that provide analysis, processing, storage and search of audio data, graphics (OCR) and texts in the natural language.

The following types of linguistic software can be distinguished:

a) text processing in the natural language:

1. Electronic dictionaries: ABBYY Lingvo, Multitrans, GoldenDict, Stardict, dict, ForceMem, etc.
2. Orfocorrectors (or spellchekers): MS Word, ispell, aspell, myspell, etc.
3. Search Engines: Google.
4. Machine translation systems: PROMT, Socrat, etc.
5. Automated translation systems, including translation memory management software: OmegaT, Trados.

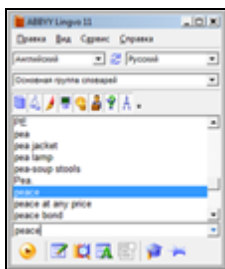
b) the OCR character recognition system: Finereader, CuneiForm, Tesseract, OCRopus.

c) language systems:

1. Language analysis systems: Dragon, IBM through voice.
2. Systems of speech synthesis: Agafon.
3. Voice Translation Systems (Recognition and Synthesis): Speereo.

9.2. The main linguistic software

ABBYY Lingvo



Screenshot of ABBYY Lingvo 11. The first step

Type: Electronic Dictionary;

Developer: ABBYY;

OS: Windows, Windows Mobile, Symbian OS;

Version: x3 (Aug. 13, 2008);

License: Proprietary;

Website: www.lingvo.ru.

ABBY Lingvo is a family of electronic dictionaries. Created by Russian company ABBYY 2008, a new version x3 has been released. The volume of the vocabulary is over 8.7 million elements. Lingvo translates from Esperanto as ‘language’, as there are articles in the ABBYY Lingvo (LingvoUniversal and LingvoComputer) dictionaries about it.

Multilingual version covers 11 languages: Russian, Ukrainian, English, German, Spanish, Italian, Turkish, Latin, Chinese, Portuguese. There is also a European version – 130 dictionaries in 7 languages and the English-Russian-English electronic dictionary.

ABBY Lingvo does not have full-text translation functionality, but it can literally translate texts from the clipboard. In some dictionaries in English, German, and French, most words are pronounced by professional native speakers.

The program includes a tutorial module Lingvo Tutor, which helps to memorize new words.

In addition to the existing 150 professional vocabularies, lexicographer work results from ABBYY staff and authoritative paper and electronic dictionaries, there is a broad base of free, user-friendly dictionaries for the program. Dictionaries are pre-screened and are in general access on the website of the Lingvo Linguistic Association.

StarDict



StarDict



Screenshot of the program in the GNU / Linux environment

Type: Electronic Dictionary;

Developer: StarDict Team – Hu Zheng (whale) and others;

OS: BSD (FreeBSD, NetBSD, OpenBSD), POSIX (GNU / Linux, Solaris, etc.) Win32;

Last version: 3.0.2 (May 19, 2009);

License: GNU GPL;

Site: stardict.sourceforge.net (English).

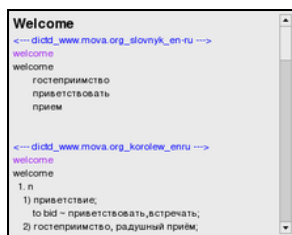
StarDict is a free shell for open source dictionaries, capable of translating, voice-talking, using fuzzy queries and templates, searching online dictionaries, besides the gender conclusion. Developed in C++, using the GTK 2 graphics library and UTF-8 encoding.

History

The dictionary is the successor of StarDic, developed by Ma Swan (Chinese) On Motif / LessTif, including the name and the version. The previous versions of the program had an interface similar to the Dictionary PowerDict, developed by the Chinese company KingSoft. From version 2.4.2, design differs from the PowerDict interface by expanding the ability to search and add dictionaries of different languages.

Since September 2006, an online version is available; it includes all major dictionaries of the project. Starting from version 2.4.5, StarDict can run without the use of GNOME 2 libraries. Version 3.0.1 was released in November 2007.

Opportunities



The program function of scanning of selected elements and displaying the result in popup windows.

- *Search by template.* You can enter words containing ‘*’ and ‘?’ as templates.
- *Fuzzy request.* You can use ‘fuzzy query’. It uses the Levenshtein algorithm to calculate the similarity of the two words and gives the words that are most suitable for the query entered. To use this feature, the request must begin with ‘/’.
- *Full-text search* is designed to search the word in the dictionary without the help of the index. This is a slower search, but it allows user to search for a match in the text of the article.
- *Scanning of selected.* When you select a word and, depending on the settings, when the key is pressed, its translation is displayed in the popup window.
- *Dictionary management.* Excluding unnecessary dictionaries, as well as setting the order of their use when requested.
- *Internet search* for various online dictionaries.
- *Words pronunciation.* In the presence of sound recordings, the dictionary can perform pronunciation of words.
- *Translation of full texts* on the use of Internet services.

Dictionaries

The dictionary format is based on DICT (also uses dictzip for compression), character information is stored in UTF-8. There are a large number (over five hundred) of dictionaries available in more than 40 languages on various topics of translation for the program. For StarDict there were ported dictionaries from DICT, Quick, Blowfish, XDict, cdict5, and others. When user installs the WyabdcRealPeopleTTS package, the dictionary also allows him to voice the translated words.

There are certain problems for creating new dictionaries, since there are still no handy editors. However, there is a simple StarDict Editor, that comes with the program. The vocabulary format is open, and, in particular, within the framework of the XDXF project (en), converters from many common formats are developed.

Other related programs

There is console version (SDCV – StarDict under Console Version) of the dictionary, that does not require an X server to work. The console version can work in interactive and non-interactive modes, supports all kinds of graphical query requests. The latest version is 0.4.2, released April 24, 2006.

Due to the popularity of the program and the presence of a large number of dictionaries, other developers have created several similar programs


using dictionaries in the format StarDict and / or duplicate program interfaces. So, jStarDict is designed for the J2ME platform, uses the same dictionaries format, and QStarDict, which is based on Qt instead of GTK +, also almost completely copies the program interface. Beginning with version 0.3.0, the authors of the multilingual dictionary SimpleDict also claimed support for the StarDict format.


PROMT


PROMT company

Company motto: ‘We make the world understandable!’

Foundation year: 1991

Location:  Russia: St. Petersburg, Moscow

 Germany: Hamburg

 USA: San Francisco

Key figures: Svetlana Sokolova (founder)

Products: Machine translation systems

Website: www.promt.ru.

PROMT (from **PROJect MT** – machine translation project) – a Russian company that develops machine translation systems. At the moment, PROMT translators exist for English, German, French, Spanish, Italian, Portuguese and Russian languages.

The company was founded in St. Petersburg in 1991 by former employees of A. I. Hertsen Laboratory of Engineering Linguistics, LDPI . The head of the company from the day of foundation – Svetlana Sokolova.

The first system of machine translation was called PROMT (1991), in 1992 the name was changed to STYLUS, and in 1998 – to PROMT again.

In recent years, PROMT has a solution based on the Translation Memory (TRADOS) technology, along with various variants of its automated translation system and associated specialized vocabularies.

The company's offices are opened in Russia, the USA and Germany. In March 31, 2010 PROMT has launched the next line – PROMT 9.0.

Prompt program description

Prompt, provided by PROJect MT, is an electronic translator with many features. This program is the best in the field of electronic translation of texts, it is very popular in Ukraine, Russia and a number of other countries. Prompt is a licensed product.

It is able to easily translate texts from Russian to English, as well as vice versa – from English to Russian. The Prompt program is designed as a machine translation system not only for English but also for other languages

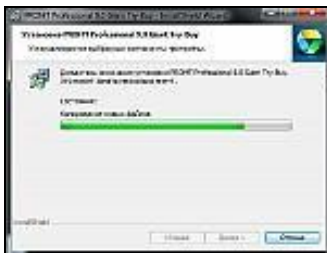
(Spanish, French, German, Portuguese, Italian and Russian). Translator Prompt employs a huge collection of very handy dictionaries in multilingual performance. Translator Prompt is an online translator assistant while working on the Internet, which greatly enhances the capabilities of the users of the World Wide Web.

Prompt products manufactured by PROJECT MT include lines for various consumer niches. For example, the expert line is PROMT Expert, a special line for business (PROMT Professional and PROMT Professional Double Giant), as well as a product for a small office (PROMT Standard and PROMT Mail) and for home use. It includes components such as PROMT 4U and X-Translators. The Prompt program is available in a variety of ways, such as bundled versions for corporate clients and individual versions of the PROMT translator.

Screenshots:



Prompt Professional 9.0



Prompt Standart 9.0



Prompt 4U 9.0

PROMT 9.0 opportunities

1. Fast translation of various documents.
2. Ability to choose a language.
3. Translation of messages in popular Internet Messengers ICQ, Skype, Windows Live Messenger.
4. Translation of web-sites in different browsers.
5. A new, easy-to-use Quick Start Guide reference book.
6. Translation of e-mail in Microsoft Outlook 2000–2007.
7. Document translation in Microsoft Office 2000–2007.
8. Translating documents in the OpenOffice.org Writer application.
9. User's personal profile in PROMT.
10. Possibility of free automatic updating of dictionaries.
11. Translation of XML documents.
12. Automatically detects the language of the source text.
13. Automatic definition of the text subject (sites, messages).
14. Orfo-spell checking system.

Description: **PROMT 4U version 9.0 + VER-Dict** is a set of programs, that includes a text translator and an electronic dictionary for fast translation of words for 80 topics for the English-Russian-English direction and 110 topics for 6 European languages. It is convenient and simple to work with: user can find a word translation or translate the whole text quickly.

Title: **PROMT 4U version 9.0 Giant** + 110 dictionaries 9.0.0.397;

Developer: PROMT Software;

Year of release: 2010.

SOCRAT

Socrat is a multiplatform computer translation system from English, German, French to Russian, and vice versa, designed for corporate work in the LAN, in Intranet and the Internet networks, as well as for personal use at home and at work.

Socrat is a family of software products designed for a professional user, working with a large amount of information, as well as for an ordinary user who has enough to get fast translation of files in foreign languages.

Software products:

- Professional system of translation ‘Socrat 2.0’ and ‘Socrat.97’ for Windows;
- Software package Russian Office (includes Socrat 2.0 and FineReader 3.0 word recognition system);

- Personal assistant for operative translation ‘Socrat.97’ (personal version);
- Professional translation server ‘Socrat 2.1 for UNIX / NTSocrat Professional’ translates texts from English, German, French into Russian, and vice versa, in the Windows 95 / WindowsNT / Windows 3.11 environment.

The translation system ‘Socrat 2.0’ translates texts from English only into Russian and from Russian to English, ‘Socrat.97’ – allows user to translate texts not only from English, but also from French and German. ‘Socrat.97’ has the ability to translate in one shell from different languages by simply switching between them. A user with any linguistic pair can complete his translation system by purchasing or licensing a new required linguistic pair. Socrat is intended primarily for the translation of business and technical documentation.

Socrat can be used in conjunction with the FineReader text recognition system for fast entry of documents from the scanner and their subsequent translation. The program works correctly with various specialized texts. There is a large collection of specialized dictionaries on various topics: medicine, oil and gas, biology, automotive, construction, polytechnic, banking, business, computer technology and aerospace, which improve the quality of translation of specialized texts.

It is possible to create new dictionaries, as well as add and correct words in existing dictionaries. In the process of interactive translation, there is access to the full vocabulary article of all the words used for the current translation.

MULTITRAN

Multitran



Automatic dictionary Multitran, CD offline version, 2004

Type: Electronic Dictionary;

Developer: Andrii Pominov;

OS: Microsoft Windows, Pocket PC, Symbian, Linux;

Website: <http://www.multitran.ru>.

‘**Multitran**’ is an Internet system, which includes such electronic dictionaries:

- English-Russian and Russian-English;
- German-Russian and Russian-German;
- Spanish-Russian and Russian-Spanish;
- French-Russian and Russian-French;
- Dutch-Russian and Russian-Dutch;
- Italian-Russian and Russian-Italian;
- Latvian-Russian and Russian-Latvian;
- Estonian-Russian and Russian-Estonian;
- Japanese-Russian and Russian-Japanese;
- Afrikaans-Russian dictionary and dictionary for translating from Russian to Afrikaans;
- English-German and German-English;
- English-Japanese and Japanese-English;
- Esperanto-Russian dictionary and dictionary for translating from Russian to Esperanto;
- Kalmyk-Russian and Russian-Kalmyk.

Description

The developer of the Multitran software is Andrii Pominov (Moscow). For today it is one of the most complete and most popular automatic online Runet dictionaries. The most fully represented are the English-Russian-English, German-Russian-German and French-Russian-French parts of the dictionary. The least complete is the Kalmyk-Russian-Kalmyk part of the dictionary. In addition to the Internet version, the offline version is distributed.

More than 90,000 people visit the Multitran.ru website every day, and the server processes more than half a million search queries. The multi-country forums are actively working, where any user can ask questions and talk with colleagues-translators. Periodically, ‘forumivky’ (pow-wow) take place – offline meetings of Multitran’s users. The Multitran dictionary database is created by scanning, recognizing and processing a large number of paper dictionaries and combining the received word transfers into a single database.

Multitran provides an opportunity to improve the quality of the vocabulary database, although the verification of the whole database in several million words requires tens of person years. Each registered user of the dictionary may leave a bug report that is found in the dictionary. These messages are written in appropriate vocabulary dictionary and become

visible to all users until the error is fixed. Since the introduction of this function, there have been about 8,000 error messages, many of which have been fixed. Thus, users not only add their terms to the site (already added more than 180,000), but also help to ‘clean’ the database errors.

Characteristics

- More than 5 million terms in all language parts of the dictionary;
 - The terms of each language pair of the dictionary are available in two directions of translation;
 - More than 800 subject areas (topics);
 - Random denial of service requests, in order to impose the purchase of a stationary version of the dictionary;
 - Possibility of active self-updating of the dictionary by users;
 - More than 1000 translators replenish the online version of Multitran directly on the site;
 - Alphabetical, morphological, phrasal (by word combinations) search;
 - Possibility of sub-text translation;
 - Automatic search of set phrases in the text of the request;
 - Simultaneous search in dictionaries, on the forum, as well as in the database of English and Russian suggestions and the database of references;
- Types of access to Multitran over the Internet online – Multitran website or corporate intranet site:
- Offline on PCs on Microsoft Windows – local or network installation;
 - Offline on Pocket PCs, as well as on smartphones running the Symbian operating system;
 - on personal computers on GNU / Linux through a browser.

OmegaT



OmegaT 1.6.0 in Windows XP

Type: Memory of translations;

Developer: Maxym Mykhalchuk;

Written in: Java;

OS: Java support required;

Version: 1.8.1_01 (2.0.0_01 beta) (September 13, 2008 (beta – November 3)

License: GNU GPL.

Website: www.omegat.org.

OmegaT is an automated translation system that supports translation memory, written in Java. Product features include segmentation of source code based on regular expressions, use of exact and fuzzy matches with already translated fragments, use of dictionaries, search of contexts in translation databases, and work with keywords.

Beginning with version 2.04, OmegaT can also translate the current paragraph of text through Google Translate.

OmegaT requires version Java 1.4, which is available for the GNU / Linux operating system, Mac OS X, and Microsoft Windows, Windows NT. Can work with OpenJDK.

OmegaT supports a variety of source code formats: text files (including Unicode), HTML / XHTML files, StarOffice, OpenOffice.org and OpenDocument (ODF), as well as DocBook, MediaWiki, Microsoft OOXML files. PO (portable object) for the internationalization library gettext, XLIFF and text files with the structure 'Key = Meaning'. OmegaT cannot work directly with files from the older proprietary formats of Microsoft Office (Word, Excel, and PowerPoint); they need to be converted to OpenDocument format (for example, with OpenOffice.org) or OOXML using Microsoft Office 2007.

History and development

The development of OmegaT was launched by Keith Godfrey. The original engine was written in C ++, but the release, published in February 2001, was already written in Java.

The first Java-version had its own translation memory format and required Java 1.3 to work. It supported StarOffice documents, as well as plain text with Unicode-coding and HTML.

Text is segmented into blocks (in practice, this usually means segmentation on paragraphs). However, in version 1.6, a custom segmentation was added on the offer, which made the program work much more convenient. As the format of translation memory, starting with version 1.4b level2, the standard TMX is used.

In versions from 1.4.4 to 1.6.0, the main developer was Maxym Mykhalchuk. In version 1.7.1, the release manager was Henry Pijffers. Today it is Didier Briel.

Trados

SDL Trados

Type: Automated translation system;

Developer: Trados GmbH, then SDL International;

OS: Windows;

Version: SDL Trados Studio 2009;

License: Proprietary;

Website: SDL Trados Home Page.

Trados is an automated translation system, first developed (since 1992) by the German company Trados GmbH. It is one of the world leaders in the class of Translation Memory systems (TM, Memory of translations).

Company

Trados GmbH was founded in 1984 in Stuttgart. In 1997, 20 % of the company's shares were acquired by Microsoft. Trados united with Uniscape Inc. in 2002, and the combined company was named Trados Inc. with headquarters in Alexandria, Virginia. In June 2005, Trados was acquired by the British SDL International, and in 2006 a joint product from Trados SDLX was released.

Computer system

The Trados system consists of modules designed to translate texts of various formats: Microsoft Word documents, PowerPoint presentations, HTML and other metadata texts, FrameMaker documents, InterLeaf, etc., as well as for terminology databases (MultiTerm module). The latest version of the system is released by the independent company Trados – 7.0. The latest version of Trados today – SDL Trados Studio 2009.

The work principle

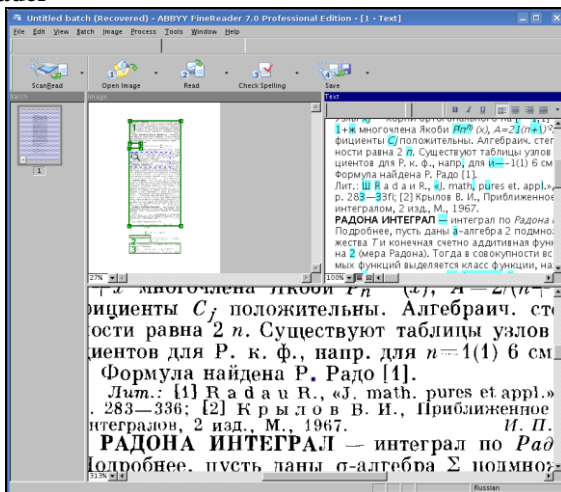
The Translation Memory concept involves identifying fragments in the translated text, translations of which already exist in the translation database, and thereby reducing the workload of the translator. The remaining fragments are transmitted further for manual processing by the translator or the Machine Translation system, MT). The translator at this stage can select newly translated fragments and add new pairs of parallel texts in two languages to the database. Such a scheme works best for the

same type of text, where the repetition of phrases is quite high, that is, for different types of instructions for users, technical descriptions, etc.

Basic modules

- Trados Workbench – the main module for document translation, integrates into the Microsoft Word Shell.
- TagEditor – a module for translating documents in HTML, XML, etc.
- WinAlign – a module for creating translation memory based on previously translated bilingual texts.
- S-Tagger – a module for translating documents in FrameMaker and InterLeaf format.
- T-Window – a translation tool for PowerPoint documents.
- MultiTerm – module for glossary management.
- ExtraTerm.

ABBYY FineReader FineReader



Type: Optical character recognition;

Developer: ABBYY Software House;

OS: Microsoft Windows since 2000, Mac OS X, starting with Linux version 10.4. CLI version 8.0 was released. Versions 7.0 and 8.0 work well under wine, there is also a temporarily free online version;

Version: 10.0.102.109 (February 1, 2010);

License: Proprietary commercial software;

Website: <http://www.abbyy.ru/finereader/>.

FineReader is an optical character recognition system developed by Russian company ABBYY Software House.

Opportunities

Supports text recognition in 184 languages and has built-in spell checking for 38 of them.

According to some reports, after some training system, it can begin to recognize handwritten text, but it will need to be taught to the user's handwriting.

Online version

There is an online version temporarily free: while the beta version is running, a registered user can recognize and convert up to 10 pages per day for free.

CuneiForm

Type: Optical character recognition system;

Developer: Cognitive Technologies;

OS: Microsoft Windows, Unix-like;

Version: v12 Master (December 12, 2007);

Test version: Source codes (April 2, 2008);

License: Freeware / BSD License;

Website: www.cuneiForm.ru, www.openocr.org.

CuneiForm is a freely distributed open source optical recognition system for the Russian company Cognitive Technologies.

Initially, the CuneiForm system was developed by Cognitive Technologies as a commercial product. CuneiForm was distributed with some scanner models. However, after several years of development breaks, in December 12, 2007, the company announced the opening of the program's initial texts, which took place on April 2, 2008.

Features

CuneiForm is positioned as a system for converting electronic copies of paper documents and graphic files into an editable form with the ability to save the structure and headset fonts of the original document in automatic or semi-automatic modes. The system includes two programs for single and batch processing of electronic documents.

CuneiForm is an omniophantine system.

History of development

In 1993, Cognitive Technologies signed an OEM contract with Corell Corporation, a Canadian corporation, where the Cognitive Recognition Library is built into the popular Corel Draw 3.0 (and later versions) publishing package.

In 1996, the OCR CuneiForm '96 version was released, where adaptive recognition algorithms were first introduced in the world.

Adaptive recognition is a method based on a combination of two types of algorithms for recognizing printed characters: multifont and omnifont. The system generates an internal font for each document entered, based on well-printed characters, that is, the dynamic adjustment (adaptation) is used for specific input characters. Thus, the method combines the versatility of the non-font-based approach, as well as the high accuracy of font recognition, which can drastically improve the quality of recognition.

In 1997, the CuneiForm system first introduced technologies based on neural networks. Algorithms that use neural networks to recognize characters are constructed in this way. What comes to recognize the image of the character (raster), acquires some standard size (being normalized). The values of brightness in nodes of a normalized raster are used as input parameters of the neural network. The number of output parameters of the neural network is equal to the number of recognizable characters. The result of the recognition is a symbol that corresponds to the highest value of the source vector of the neural network.

In 1999, the mechanism for reproducing the form of the source document 'What you scan is what you get' was developed. It allows user to submit a document of its original form, ensuring that each fragment is in the right place. This is especially true for documents with complex topology: multi-column texts with headings, annotations, graphic illustrations, tables, etc.

Perspectives

According to the official website, on December 12, 2007, Cognitive Technologies launched the program 'Recognition should be on every computer'. The first step in this program was to release the freeware version of OCR CuneiForm and open its source code. The next step is to launch a free online recognition service on the server www.cuneiform.ru.

On April 2, 2008, Cognitive Technologies announced the opening of the source code of the program. Today, developers have chosen a BSD license for the project. In 2009, graphical interfaces were released to the open version of Cuneiform based on the Qt 4 library – Cuneiform-Qt, YAGF. Starting with version 0.9.0, an open version of Linux can be used as libraries.

Tesseract

Type: OCR;

Developer: Hewlett-Packard, Google;

Written in: C, C ++;

OS: Windows, Linux, Mac OS X;

License: Apache 2.0;

Website: <http://tesseract-ocr.googlecode.com/>.

Tesseract is a free text recognition program developed by Hewlett-Packard from the mid-1980s to the mid-1990s, and then ‘lied on the shelf’ for 10 years. Recently (in August 2006), Google bought it and opened the source code under the Apache 2.0 [1] license to continue the development. At the moment, the program already works with UTF-8, but knows only English, German, French, Spanish, Italian and Dutch.

OCROpus

Type: Optical Character Recognition;

Developer: Thomas Breuel, DFKI;

Written in: C ++ and Lua;

OS: GNU / Linux, Debian GNU / Hurd, Debian GNU / kFreeBSD;

License: Apache License v2.0;

Website: <http://code.google.com/p/ocropus/>.

OCROpus is an OCR system based on the recently discovered core recognition – tesseract. Open Source based software package for text recognition, distributed on Apache License 2.0. According to the developers’ design, with the help of OCROpus it will be possible to determine the text content of digital images and translate it into plain text format for further editing. In addition to printed text, the program will be able to recognize handwritten materials as well. As an alpha release, OCROpus uses the simulation language from another project supported by Google OpenFST. OCROpus is currently available only for GNU / Linux, but there are collections for both Debian GNU / Hurd and Debian GNU / kFreeBSD.

Usage

Currently, OCROpus only uses the command line interface, by taking directions to incoming text images and displaying data in the hOCR format (open format based on HTML). If more precise control is required, user can specify a command prompt to execute specific operations (for example, one line recognition).

History of development

- 0.1.0 – Alpha – 22 Oct 2007.
- 0.1.1 – 14 Dec 2007 – Improved package build system.
- 0.2 – Alpha 2 – May 31, 2008.
- Beta – Scheduled for August 2008.
- 1.0 – Scheduled for Q3 2008 – Packages for other operating systems + GUI.

9.3. Comprehension Questions

1. Definition of linguistic software.
2. Types of linguistic software.
3. Text translation in additional software shells.

4. ABBYY FineReader system.
5. Main functions of the ABBYY FineReader system.
6. Optimal settings for ABBY FineReader system when working with text.
7. ED ABBYY Lingvo.
8. ABBYY Lingvo dictionary version x3.
9. Definition of Pragma and description of the program.
10. Definition of Prompt and description of the program.
11. Programs Trados and OmegaT, description of programs.
12. Work of SDL Trados – Translator's Workbench.
13. Work of StarDict and GoldenDict systems.
14. Work of the Multitran program.
15. Comparative characteristics of linguistic software.

X. LAYOUT

10.1. Layout, history of layout

Layout in publishing and printing – the process of forming pages (layout fields) of the publication by arranging text and graphic elements, as well as the result of this process, that is, the field itself.

History

In the era of the metal set, layout included a set of text lines typed manually, on a linotype or a monotype, and an illustration cliché, the layering of these elements with free materials (margins and mascots, rulers, etc). As the development of digital technology layout began to be made on computers with the help of special programs, the most popular of which, since the 1990s, were Ventura Publisher, Adobe PageMaker, Adobe FrameMaker, CorelDraw, Microsoft Publisher and QuarkXPress, and today, Adobe InDesign as well. The alternative to visual programs is the computer version systems such as LaTeX or Lout.

10.2 Layout programs

In the middle of the layout programs there is a relative specialization: some are suitable for the creation of various types of advertising, magazine, artistic products, others – for providing the necessary means for the layout of special technical and reference literature, books and catalogs. The first ones (PageMaker, XPress, InDesign) focus on working with graphics, while others (FrameMaker, Ventura Publisher, TeX) – automate the design of complex text structures, often saturated with tables, formulas, and links.

Adobe PageMaker

PageMaker has been able to easily compose the text since (from the 2nd version it has a palette of styles) and graphics its appearance. The availability of the PC version and the subsequent appearance of correct Russification had an impact on the expansion of the program in the post-Soviet space, where it stayed for many years, competing with QuarkXPress. In 1994, PageMaker, along with other Aldus developments, switched to Adobe, but despite the emergence of new versions, Quark was increasingly inferior to the struggle for a professional market. As a result, Adobe has moved PageMaker into business applications list. In this way, it is suggested that PageMaker is used primarily for the purpose of operating

office printing, and its successor in the niche of professional publishing systems becomes InDesign.

QuarkXPress

The program, designed by Quark company in 1986 as a word processor for Mac, came out in 1987 as a layout package, that soon took Aldus the lion's share of the world's publishing market. The version for Windows came out only in 1992; these few years gave way to 'PageMaker' in the former Union, where a lot of small publishers, as a rule, could not afford to buy a Mac. But the appearance of QuarkXPress Passport with support for multilingual documents allowed XPress to spread across East Asia, Israel, the Arab world, where it had virtually no alternative.

XPress is a professional layout package that for many years is actually an industry standard. Exceptional ease and flexibility, which is achieved mostly due to the large number of extensions that connect to the program for several years, will hold its position. This is also facilitated by the focus of the process on this particular package in the publishing industry. However, if Quark does not release a major update to its core program, it will have an unlucky lot to fight such a serious competitor like InDesign.

However, some of the features of the 5th version of the program have expanded its functionality: implementation of some functions, previously only available in extensions, support of large volumes of documents, layers, guides management, creation of own tables, development of web-documents. Unfortunately, XPress does not support transparency (though it does not have access to Adobe technology), but there is a third-party extension, that allows not only to import PSD files, but even to work with their layers and channels.

Adobe InDesign

InDesign was already aggressively represented as the 'Quark killer' at that very time it appeared on the publishing market. Indeed, although it is still too early to write off the accounts of its most important competitor, InDesign is a new generation program. Integrated with programs like Photoshop and Illustrator, it is not only better than Quark, but also imports tables from Word and Excel, retaining the formatting. InDesign also implements such important and in-demand tools, as creating custom tables, creating shading and transparency of objects; support of PDF and PSD formats was improved. In contrast to Quark, InDesign has numerous differences. It has built-in file collection features for remote printing and preflight function. For InDesign, a large number of plug-ins have already been created and continue to be created now. Obviously, in order to attract

the many users of PageMaker and Quark, InDesign announced the possibility of opening the publications created with the help of these programs. The general ideology and mutual integration of Adobe products also reduce the time it takes to master this program.

The relatively weak point of InDesign is the fact that, unlike Quark, serious system resources are required for its normal functioning. Another difficulty, that Adobe has yet to overcome, is to convince the publishing industry, that reorientation of the technology chain, including the updating of the material base (upgrading the machine park, turnips, etc.), is a necessity, that will be procured using a powerful new-generation software.

Adobe FrameMaker

FrameMaker is the development of FrameTechnology, acquired by Adobe in 1995; is relatively unknown in Russia, but is used more actively than Corel Ventura in the West. With its help, much of the volume documents are produced in the world. It is used in book publishing houses, major industrial corporations and scientific institutions. In Russia, FrameMaker was, until recently, little commonplace because of its apparent complexity and the lack of documentation and educational literature in Russian.

A distinctive feature of FrameMaker is automation of layout not only on the basis of paragraphs design, but also on the basis of powerful templates, which makes it attractive for repetitive and serial publications, the style of which should be clearly elaborated and, when created once, should no longer take time to be manually 'proved'. Instructions and manuals, encyclopedias and reference publications, corporate documentation – where it is necessary to publish complex, repetitive materials, to create a design based on them and to identify the actual information component – the application of this program is fully justified.

Corel Ventura Publisher

Ventura is a program originally created for GEM, and then for Windows and Macintosh, soon after its occurrence, practically caught up with the PageMaker prevalence. However, even then the program contained a lot of bugs, which, along with the glory of one of the most powerful and unique products, brought it a bad reputation. The program was created by Ventura Software, then owned by Xerox Desktop Software, until it was bought by Canadians from Corel in 1993, until recently, they paid so little attention to it that caused angry feedback from Ventura fans all around the world. Only recently, Corel has announced, that it intends to upgrade Ventura and bring back DTP programs to the market.

The strengths of Ventura are such features as tables, that are highly customizable with the ability to flow through the stripes, automatic generation and numbering of page footnotes, the ability to assign a style not only to the paragraph, but also to other design elements; too powerful adjustment of the paragraph properties, and such means of registration as the letter, the background and the paragraph frame are determined by the style; similarly, fitting the image size to the box size is defined as the box attribute; the indentations within the text boxes can be independent, as well as the size of the columns, and the rulers can be automatically placed in the interlacing; a group of objects can be tied to a certain place of the text. Among other ‘benefits’ – the built-in formula editor, the possibility of publishing databases, own word processor, ‘Corelean’ system of visual control of stripping and color separation.

The weak sides of this package is that it is difficult to master and unstable in the work.

TeX

Despite the fact that TeX is practically not used for plotting illustrations or working with color (it is oriented on scientific and technical texts), it has laid some technological ideas, that will allow it to work on any platform and system, and the storage of output files in the text format even adds it compatibility. The core of the TeX remains unchanged and distributed free of charge, but supports the expansion of functions at the expense of connected utilities. With the help of some, user can sketch on the WYSIWYG method, print PDF files, or view the document content in Internet browsers.

Due to the narrow specialization of the program, TeX is used in publishing houses producing scientific and technical literature, where it is considered to be de facto standard, its users are merged into the TeX User Group (TUG) association, and in Russia – CyrTUG.

10.3 Computer publishing system QuarkXPress

QuarkXPress (sometimes just Quark) is a professional computer publishing system, that allows user to create, edit, and compose layouts in WYSIWYG mode. QuarkXPress is a powerful publishing system with an intuitive interface and an advanced set of tools for text processing, color management and graphic elements, as well as web page design. The QuarkXPress program is widely used in books, newspapers and magazines, advertising and marketing agencies, design firms and printing houses.

Since the release of the first version in 1987 and to date, QuarkXPress rights are owned by Quark Inc. The first version was running under the

control of Mac OS, the latest releases (QuarkXPress 8) support Mac OS X to version 10.6.2 (Snow Leopard) and Windows to version 7. Multilingual version (QuarkXPress Passport) supports 36 languages, including Russian (since version 7.02 – automatic transitions and spell checking, from version 7.3 – interface language).

10.3.1. History of QuarkXPress

The first version of QuarkXPress was released in 1987 and worked on Macintosh computers; the first version for Windows appeared in 1992. Version 3.3 for Mac, released in 1996, was considered as stable and working with Adobe Postscript fonts as easy as Apple TrueType fonts.

The first version of QuarkXPress included the application programming interface ‘XTension’, which allowed third-party developers to create their own additional extensions for the application. Introduced in 1989, XTension, along with Apple Computer HyperCard, made Quark one of the first apps, that worked with extensions created by third-party developers.

In the 1990s, QuarkXPress gained widespread popularity in the field of professional layout and polygraphy design due to its ease of use, unmatched system requirements, support for vector fonts and other widely-requested features. At the time of the launch of its main competitor, Adobe InDesign in 1999, QuarkXPress, despite the constant criticism of the high cost of the license and a fairly long period of innovation, de facto was an industry standard, covering about 90 % of the market.

The release of the fifth version in 2002 led to a conflict with Apple, since the release still did not support Mac OS X, while Adobe InDesign, released the same week, did. At the same time, President of Quark Inc. Fred Ebrahimi made a sharp critique of the Macintosh platform and noted that anyone, who is not satisfied with Quark's work on the Mac platform, should try something else.

As a result of competition with InDesign, Quark began to lose its ground and was forced to take a number of steps to stay on the market. The version for Mac OS X was released in 2003. In 2004, Quark began to reduce the cost of the license; in 2006, it began to distribute the outdated version 5 at that time for free (as an addition to the British ‘Computer Shopper’ magazine), suggesting thus attracting the attention of consumers for further purchasing the updated version. Despite past discrepancies, in August 2006, Quark released a new version with support of Mac Intel, overtaking InDesign for about 10 months.

10.3.2. QuarkXPress program description

QuarkXPress 7 contains over 160 new features and enhancements, that allow user to combine layout, design and content creation processes. Thanks

to new features, such as Transparency Management tools and Composition Zones technology, as well as improved printing and PDF creation features, the application provides complete freedom in design and collaboration with documents.

QuarkXPress Passport

QuarkXPress Passport combines all the features of QuarkXPress, as well as provides additional features for displaying menus, spell-checking and word-transfer rules in 11 languages, making the process of creating publications in a foreign language simpler and more efficient.

QuarkXPress Passport is often used by companies, that need to provide document output in more than one language, or to engage with a foreign audience. The application has been widespread among employees of government agencies, embassies, translation bureaus, advertising agencies, airlines, international corporations and cultural centers.

1. Intelligent Transparency Management Tools

With the QuarkXPress 7 precision tools, user can set the transparency of the frame, background, or single character in color tuning, without the need for additional operations or applications.

2. Job Jackets QuarkXPress 7 technology provides advanced design capabilities, and thanks to the Job Jackets technology, virtually unblemished user experience is provided. Job Jackets technology, based on the JDF standard, ensures that the project complies with all the specifications from the start of the development process to the conclusion of the finished printing documents. At the same time, the projects communicate with dynamically updated specifications that include everything from the stylesheet and colors to the size and number of pages.

Thanks to this technology, automatic matching of existing and new files to the given specifications can be ensured. Job Jackets allows user to restore requirements according to changes made by an art editor or color management and printing specialist.

3. QuarkXPress 7technology (Composition Zones) provides collaborative work on projects. With the Composition Zones technology, several people can work on the layout at the same time. User can define a part of the page, the entire page, or the entire layout as his own layout zone, and then export that zone to a separate file. Other users at this moment can work on the rest of the zones, if it is a regular QuarkXPress layout. The original layout is automatically updated when saving a zone file. This interactive

collaborative model ensures coordinated group work – over the network, using email or instant messaging.

4. Enhanced measurement tool palette

QuarkXPress 7 has a convenient and understandable interface. The measurement tool palette now provides access to all major design functions. Also, users can group other palettes and save the given configurations.

5. Improved tools for managing graphic elements

QuarkXPress 7 contains the most advanced graphical control tools and integrates with standard formats such as Adobe Photoshop (psd).

Quark Vista XTensions application, a part of QuarkXPress, provides additional image editing tools. User can create special effects and adjust the brightness / contrast, the color balance of the image, the tint and its saturation. This feature allows him to automatically control the color, so that user can use it to smooth the mask to add a finished look to the picture. Due to the advanced QuarkVista features, users can edit images directly in the QuarkXPress layout.

Using letter masks, user can create vivid, graphically complex effects without switching to the second QuarkXPress program. Therefore, he does not need to switch between QuarkXPress and the image editing application, so a lot of time can be saved.

6. Support of OpenType and Unicode formats

With the support of OpenType and Unicode formats, user can use additional ligatures, symbols, and advanced character sets to create documents, that are used in different countries and get high-quality effects.

7. Support for new document output formats: PDF / X, JDF and PPML

User can use the PDF / X format to ensure that the design process complies with the given rules. QuarkXPress 7 allows user to control this process by supporting PDF / X-1a and PDF / X-3 and reporting based on standard libraries of compliance. User can merge multiple XML files into a single PPML document with different formatting and settings for printing devices.

With JDF format support, users can not only attach a JDF task ticket to a finished PDF file; QuarkXPress 7 can create task tickets based on Job Tickets, thereby preparing PDF documents for printing from the very beginning of the design process.

8. Shared content

User can synchronize text and images, so that when he makes changes to one file, an update is automatically made in all related documents. Thus, users can edit images, correct text, change the font in one layout, and changes will be made to all project documents.

Thanks to the Composition Zones technology, several users can work on one layout, and with Job Jackets they can specify project specifications, including colors and style sheets that will be followed throughout the workflow.

9. Color management tools

The new version of QuarkXPress 7 has got improved color management tools. Now users have additional options, and Color Setups and Quark Job Jackets provide quick setup and automatic updates to all project documents.

QuarkXPress 7 contains more PANTONE color libraries, than any other product in this category, and allows user to control the color in Adobe Photoshop files. QuarkXPress 7 has options for managing transparency and color space, which ensures precise color adjustment. The application supports PostScript Level 3 language and has built-in GretagMacbeth color management features with black dot compensation function.

10. Improved ability to work with tables

QuarkXPress 7 provides advanced table capabilities, including splitting of the table, creating headers and footers, and applying transparency management tools for individual cells and borders. Thanks to the new features of QuarkXPress 7 and integration with Microsoft Excel, user can easily combine text and graphics in his projects.

System requirements:

a) Mac OS X 10.4 (Tiger)

- G5 or faster PowerPC-based processor or Mac Intel-based processor (G4 minimum);
- CD-ROM drive for installation;
- 1GB of available RAM recommended (256MB minimum);
- 950MB of available hard disk space for installation of QuarkXPress 7 or QuarkXPress Passport 7;

b) Microsoft Windows XP (service pack 2) or Windows Vista

- CD-ROM drive for installation;
- 1GB of available RAM recommended (256MB minimum for Windows XP, 512MB minimum for Windows Vista);
- 450MB of available hard disk space for installation.

10.4 Comprehension Questions

1. Definition of the layout concept and history of its development.
2. Layout programs.
3. Definition of the QuarkXPress computer system and brief information about its development history, features and functions of the QuarkXPress system (description of the program).

XI. MULTIMEDIA TECHNOLOGIES

11.1. General information about multimedia technology

Due to the large distribution of multimedia computers, the interest in creating multimedia applications is constantly increasing. A modern translator needs to be fully equipped with multimedia technologies to create presentations and other software products that serve to improve the perception of information or for other purposes set by the customer.

Multimedia is a modern IT that combines graphic and video with computer tools, sound and other special effects.

The category of multimedia includes a significant part of entertaining, educational and informational reference software products.

One of the undeniable advantages of multimedia is the ability to design interactive presentations on its basis. In this case, the viewer ceases to passively perceive the information and becomes an active participant in the process.

To develop multimedia applications on the most common IBM-compatible computers, user needs a multimedia computer based on Windows OS and the corresponding application software (copyrighted multimedia).

11.2. Multimedia computers, multimedia computer equipment

Multimedia computers

Division of Software Publishers Association under Multimedia PC Marketing Council (MDS) develops and distributes standards and specifications for hardware and software for multimedia computers. A device or program labeled with an MDS brand meets the requirements for multimedia technology.

A multimedia computer is usually equipped with:

- 1) sound and video cards;
- 2) loudspeakers;
- 3) microphone and high-speed CD-ROM drive;
- 4) a DVD drive;
- 5) video camera, etc.

For the most part, a MIDI-compatible sound card is used. User can attach to it electronic music instruments (synthesizer, guitar, etc.) through the appropriate connector.

The sound card, with two speakers, is designed to play high-quality stereo sound, and with a microphone – to record human speech, music and other sounds on the disc.

A video card for a multimedia computer should enable full-screen synchronized video broadcasting with adequate traffic (e.g., demos of commercials, high-definition clips and other video products).

The CD-ROM drive, apart from reading the digital information, allows user to play audio CDs and VideoCD information.

Modern computers are rapidly developing, and the content of the concept of ‘multimedia’ is rapidly changing along with the progress of their hardware base. In practice, a computer that meets the multimedia standard may not meet the user's requirements because of the rapid ‘aging’ of the standard as well.

One of the most advanced OS I / O-compatible computers – Windows XP – is a high-performance multimedia platform that defines the following features of multimedia technology:

a) architectural support of digital video, audio and MIDI; this frees users and developers from issues related to installing device drivers;

b) ‘connect and work’ technology facilitates the installation and installation of compatible multimedia devices; the programs of the CD Player, DVD Player and Media Player allow user to run audio files, and the last two – also video-media files;

c) the operating system supports the main technological innovations in the field of two-dimensional raster graphics, the construction of three-dimensional images and digital audio and video (special Video for Windows program is designed for this purpose and is already built-in in OS);

d) 32-bit OS architecture allows user to significantly improve the efficiency of his computer while working with multimedia;

e) multitasking support creates a good working environment for multimedia writers;

f) rationalized architecture of subsystems of digital video and audio, MIDI and processing of files of various formats (including formats MREG and WAV for audio and MREG and AVI for video);

g) allow user to create audio, video and animation effects of professional quality.

11.3. Multimedia projectors

Multimedia projectors – a sector of a rapidly developing computer market. They allow user to project images from his computer, VCR and TV to large screens with a diagonal of more than 10 m. They are characterized by high-resolution Full HD 1080p (1920 × 1080 pixels) and even up to

UXGA (1600 × 1200) and intense luminous flux (up to 7000–12000 ANSI-lm), which makes it possible to apply them for presentations in large non-darkened rooms. Among their advantages there is portability (their mass is 2–4 kg for models with brightness up to 1500 ANSI-lm and up to 15 kg with a brightness of more than 3000 ANSI-lm).

Pocket projectors, made with the help of LCoS technology, are characterized by 640 × 360 pixels resolution and 15 lm brightness, with a weight of about 100 g. They can be connected to any DVD player or gaming consoles, as well as to the Apple iPhone. They have a size of 5.5 × 12.5 cm, slightly larger than a regular mobile phone. This projector is capable of projecting images of a diagonal of 50 inches (127 cm). In addition, it has mini speakers, a headphone jack (3.5 mm), a USB interface and a SD memory card slot.

Also, the projectors are embedded directly into smartphones (for example, Samsung's Galaxy Beam).

Almost all multimedia projectors have lenses with variable focal lengths, which allows user to set image sizes without moving the projector.

Modern multimedia projectors, the main characteristics of which are given in Table 11.1, have a rear scan function from left to right and from bottom to top, which allows them to be installed on the back of the screen and even attached to the ceiling.

■ Проекционные технологии: сравнительная таблица						
Характеристики	Технология	CRT	3LCD	DLP	D-ILA	DLP LED
Использование цветовой модели		RGB	RGB	RGB	RGB	RGB
Разрешение, минимальное		—	800 × 600	480 × 320	1400 × 1050	800 × 480
Разрешение, максимальное		—	2048 × 1080	2048 × 1536	4096 × 2400	1920 × 1080
Яркость, лм		1000	1200–7000	10–30000	600–20000	100–800
Контрастность		1000:1	400–100000:1	1200–15000:1	1800–30000:1	1000–7500:1
Источник света		электронно-лучевые трубки	галогенная лампа	галогенная лампа	галогенная лампа	галогенная лампа
Срок службы системы подсветки, ч		8000	3000–5000	3000–5000	3000–5000	20000–100000
Предпочтительный тип изображения		любой	нестатичный	любой	любой	любой
Приложение		профессиональные системы отображения	домашний кинотеатр, офис, учебная аудитория	домашний кинотеатр, офис, учебная аудитория, профессиональные системы отображения	домашний кинотеатр, профессиональные системы отображения	домашний кинотеатр, профессиональные системы отображения
Минимальная стоимость проектора, руб.		нд	16 300	8600	114 000	9300

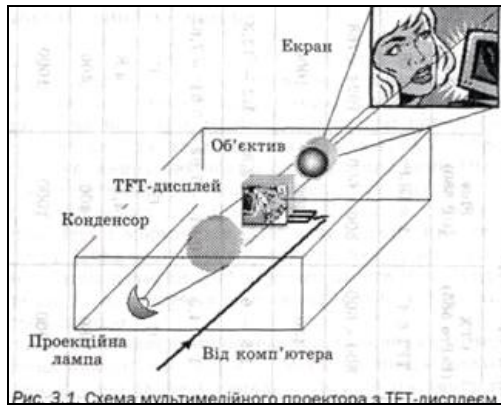
In such position the projector does not take too much space and does not interfere the viewing. Many multimedia projectors have a built-in audio system (power assist and stereo system) and provide high-quality accompanying sound of presentation in small and large rooms.

11.3.1. LCD-technologies of multimedia projectors manufacturing

The basis of modern multimedia projector is the light source and liquid crystal display (LCD – Liquid Crystal Display) that build up the image. There are several LCD-technologies manufacturing multimedia projectors:

1. TFT-technologies (liquid crystal display on the thin-film transistor). The picture element in such projector is created by using three liquid crystal eyes (one for red, green and blue image components). Each eye has controlled thin-film transistor. The set of eyes that control one color forms a liquid crystal matrix. Display that consists of three liquid crystal matrices is a rectangle with sides 10×15 cm (fig. 3.1).

The silhouetting systems with TFT-display are especially useful for projection data in a graphical format. They are characterized by a high-quality transfer of colors and provide a high speed of image change on the screen.



2. Polysilicon LSD-technology based on the use of three small liquid crystal matrices (panels) that are from 2.3 to 3.3 cm. Each matrix controls its color – red, green or blue (fig. 3.2).

The matrices have very good light transmission and provide higher brightness of colors. The projectors with polysilicon panels allow to adjust manually or automatically the image size. The usage of them allows projecting both simple text and complex multimedia images.

11.3.2. DMD/DLP-technology

It based on the use of 1000 microscopic mirrors with electronic control, located on the semiconductor IC. The tricolor filter, through which the light ray passes, rotates synchronously with the image control device. Due to the a high speed of shots change, three separate color shots that appear sequentially one by one, reflecting from the microscopic mirrors, form one color image (fig. 3.3).

DMD/DLP differs from other technologies by balance, image brightness and the fact that it does not have the acinose structure.

The light source in the projection systems may be a halogen or metal-halide lamp with the capacity of 120–200 W with service lifetime from 1000 to 4000 hours.

11.3.3. D-ILA-technology

The ILA (Image Light Amplifier) technology, developed by JVC, and improved D-ILA (Digital Direct Drive Image Light Amplifier), are the DLP and 3LCD hybrid technology. The images formation is carried out by silicon liquid crystal matrices LCOS (Liquid Crystal on Silicon) reflecting light type.

Thus, the projectors D-ILA have advantages of 3LCD and DLP-projectors, which are great contrast, brightness, color rendering and image sharpness. The disadvantages of D-ILA-projectors are a relatively large cost and a high level of noise related to necessity of using powerful cooling systems.

With the technology development almost monthly appear new, more advanced models. The projectors are becoming brighter, lighter, more economical and cheaper.

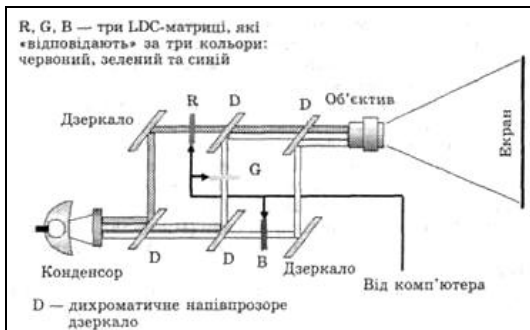


Рис. 3.2. Схема мультимедійного проектора з полісиліконовою LCD-технологією

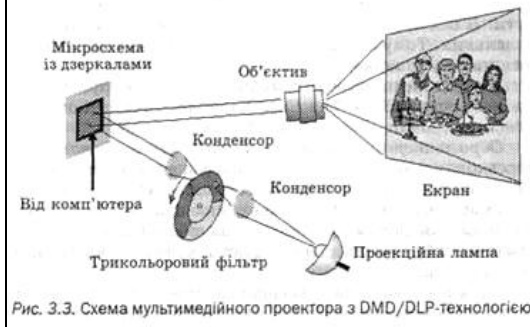


Рис. 3.3. Схема мультимедійного проектора з DMD/DLP-технологією

11.4. The classification of authorial multimedia means

Authorial multimedia means are the means (applications) that have pre-prepared items for the processing of interactive multimedia programs; its usage is an accelerated form of processing interactive multimedia project that reduces the cost of works in several times. These means are differ in specialization, capabilities and ease of learning.

Scripting language. It is object-based programming language, in which the special operators determine the media items interaction, the active zones location, buttons assignment, etc. However, the ability to edit the media items (graphics, video, sound) in such a language is very limited. Or it may not even be. Mostly the scripting languages belong to the interpretative ones. Therefore, authorial means, in comparison with others, have low operating speed.

The authorial multimedia means, which based on the scripting language, are Ten Core Language (Computer Teaching), Media View (Microsoft) etc.

Creative data flow control. The base of the authorial means of such type has the Icon Palette, which indicate the various interaction functions of the means items, and the Flow Line, which indicates the links between icons. These icons bring the text and graphic images on the screen, move them, play movies, sound, etc.

The Flow Line is a means of constructing a hierarchical scheme application. On it pulls the appropriate icons. The set of such icons corresponds to the sequence of actions that are rendered after starting created application for rendering.

The substantial advantage of the authorial means of such type is the reduction of the work period with the design application with complex interaction functions. However they are expensive (its value is several thousand dollars).

Shot. This type of the authorial means is similar to the type of creative data flow control. It also has the Icon Palette. However, the links between them can even reflect complex branching algorithms. These authorial means have a high operating speed, but require automatic tuner, because the errors are visually elusive.

Card with the scripting language. This type of authorial means is powerful due to scripting language use. However, it requires strict and rigid structure of the plot. The developing application process resembles here the work with a book. To create a card page by page, and then use the hypertext capabilities to navigate between pages and objects within the page.

Hypertext is text that has links to other parts of the document, other documents in the network or the objects of non-text nature (sound, graphics and video).

The authorial systems are with a lot of templates, examples and done graphics items for the interface user. And pre-prepared special buttons hat gave an opportunity to control an external CD-player, cassette recorder or a video recorder.

The main disadvantage of the authorial means of this type is inability to provide precise control of synchronization and parallel processes achievement. For example, the sound file has to start and finish before the beginning of the next scripted event. The following authorial means are mainly used for developing hypertext applications (training courses, presentations) and application programs with intensive movement (games). The best use of card with scripting language is developing applications that can logically combine in the form of separate cards with hypertext links.

Timeline. The following authorial means by the structure of the user interface are similar to a sound editor for multichannel recording. The main items are the troupe (database of the objects) and the score (frame schedule of events with these objects). Each appearance of the object from the troupe in one of the score channels called **sprite**. For sprites control, based on user actions, is using object-event scripting language.

The authorial means, which based on the timeline, are used for the development of complex commercial applications and computer games with intensive animation, which required the various multimedia components synchronization.

Hierarchical objects. Here, as in the object orienteering programming, uses an object metaphor. There is an ability to create complex constructions with developed plot through the visual objects rendering and informational components of the multimedia application. Such authorial means are expensive, and so they are used mostly by professional developers.

Hypermedia-links are similar to the shot type. They show the conceptual ties between the items. With the help of them the hypertext applications *with* the elements of multimedia can be develop.

Program clock references. In such references are used special commands – the **tags**, that provide interaction and integration of media elements. They are used mostly for training window reference materials (dictionaries, manuals), and also in the process of creating pages for the Internet sites.

11.5. Comprehension Questions

1. The definition of the term "multimedia" and general information about multimedia technology.
2. The hardware of multimedia PC.
3. The multimedia projectors, the basis of modern multimedia projector.

4. LCD-technologies of multimedia projectors manufacturing
5. The multimedia authorial means and their classification.

11.6. Presentations

11.6.1. Kinds of presentations

There are **following kinds of presentations** depending on the method of realization on the computer:

- with the script;
- interactive;
- automatic.

1. Presentation with the script

Presentation with the script is the traditional presentation with slides, supplemented by means of projection color graphics and animations with the output of video material on a large screen or monitor. In it it's possible to make changes during the demonstration process and to use captions that flow on the screen and provide additional explanation.

The animated text combined with animated charts, graphics and images helps to focus the audience on the mainstream and promotes better memorization of the information. As a rule, the presenter is voicing the material himself.

The presentation with the script is the most common kind of multimedia presentation.

2. Interactive presentation

The interactive presentation is the window between user and computer during which the user decides what material for him is important, and using the mouse or by pressing the button, choose the necessary object on the screen. After that, the computer gives information which is requested.

All interactive presentation programs control events. It means that when a certain event occurs (pressing the button, positioning the cursor on a screen object, etc.); the program performs the corresponding action.

The interactive presentation allows finding necessary information, delving into it as much as it was provided by a presentation developer. For example, the user begins to learn a particular product with the general characteristics displayed on the screen. Then, click on the hyperlink (on the underlined or highlighted color word), on a button or icon, he has an opportunity to read more information about the subject that interests him.

The information here can be given:

- graphically;
- in a text form;

- using animation or video;
- as the text reading "by the author" with the sound effects using;
- in the form of various combinations of all of the items.

The interactive presentation can easily grab the attention of the user and maintain his interest in the material for a long time.

3. Automatic presentation

The automatic presentation is finished information product. It could be transfer on the video tape, flexi-disk, CD and send to the potential consumers.

11.6.2. Types of presentations

There are **following types of presentations** depending on the implementation areas:

- trading;
- marketing;
- training;
- corporate.

1. Trading presentations

The trading presentations allow to tell what consumer's needs can satisfy the product and what benefits it has, and also to provide potential buyer with all necessary information within a short period of time.

The trading presentation can be:

- presentation with the script is demonstrating according to the specific script in the future buyer office or at his home;
- interactive – it can be record on one of the media of information and send it to the buyer for the pre-determine his interest in the product;
- automatic – in this case, the material is placed according to the scheme: beginning (basic information), mid (benefits) and end (summary). It is intended for the buyer to familiarize himself with the product.

2. Marketing presentations

The marketing presentations are used during the conditions preparation for future trading presentations. They are intended for a mass audience of consumers (held at the exhibitions and fairs or at the buyer's office), for sales agents, etc.

For focusing on the company and its products, the presentation can combine graphics, animation, video and sound.

An example of a marketing presentation is commercials on television.

The marketing presentation can also be the presentation:

- with a script, it can be sent to office managers for demonstrating in the sales departments. It contains usually announcements and review of new products, and also comparative analysis of their own company's products and competitors' products;

- interactive. Provides the opportunity to choose the way how to get acquainted with the company activities and its products, and the degree of material detailing. The interactive presentation allows to deliver information to the different consumer groups, it is also used at the exhibitions and fairs;

- automatic. At the exhibitions such presentations often are the basis of exposition, they can be sent out to consumers on a diskette, CD, video cassette, etc., covering large groups of potential buyers.

3. Training presentations

These presentations are used by teachers in order to conveniently and visually present the material. Examples of the training presentations:

- presentation-seminar (the acquaintance with new products; the comparative analysis of products; the review of current state of the market; the form of teaching students or homeworkers);

- presentation for self-education (an interactive system through which you can get information about the product, company, market, competitors, etc.);

- presentation-advice (manual for the teacher or lecturer about proper performing presentations, etc.);

- presentation for the corporation clients (training or thematic disks that are sent on request, etc.).

The training presentation can be:

- presentation with the script (for example, on the seminar at the university); allows to adjust, depending on the audience, the set and sequence of materials;

- interactive (training courses for self-education); can be used in a local network or in the Internet;

- automatic (video support of exhibits in the museum, etc.).

4. Corporate presentations

The corporate presentations intended to deliver information to the corporate shareholders, among others via the Internet, which allows getting access to hypertext hypermedia system Word Wide Web (WWW). The hypertext documents (annual reports, booklets, etc.) that are in the WWW, contain text links to other documents posted on WWW-servers around the world. To appeal to a hypertext document it's enough to click the mouse on the underlined text fragment.

The function of hypermedia in WWW is a further development of the idea of hypertext. Clicking on the quickly access icon in the document gives access to graphic, audio and video information, and computer animations. The president of the company might, for example, send the corporate messages (official documents), accompanying them with audio or video comments.

Examples of the corporate presentations:

- the annual report;
- electronic magazine;
- presentation for shareholders;
- presentation for services that work with personnel;
- presentation on investments and financing issues, etc.

The corporate presentations included all kinds of presentations:

- presentation with the script is intended for demonstration at the big meetings of the company shareholders, such as issues related to obtaining investments. The presentation, in which economic justification of the project financing is submitted, as a rule, is intended to display on the computer of one person (for example, at the office of the bank-investor representative);

- interactive presentation allows the user to make acquainted with the information about the structure, products and personnel of the corporation;
- automatic presentation, recorded on videotape, can be sent to shareholders, bank-investors, employees and others or demonstrate at the exhibitions and fairs.

11.7. Comprehension Questions

1. Kinds of presentations.
2. Types of presentations.

11.8. General information about Microsoft PowerPoint

11.8.1. The definition of PowerPoint and history of the development

The domestic software market is currently offering rather poor selection of authorial multimedia means taking into account their support, acceptable for the user.

Microsoft PowerPoint (full name **Microsoft Office PowerPoint**) is a program for creating and demonstrating the presentation that is part of Microsoft Office and is available in editions for operating systems Microsoft Windows and Mac OS.

History

The idea of PowerPoint came from Bob Gaskins, the student of the University of California, Berkeley, who decided that the graphic interactive

materials century is coming. In 1984, Gaskins joined the Forethought and hired the developer Dennis Austin. Bob and Dennis have joined forces and created the program Presenter. Dennis and Tom Rudkin created the original version of the program. Later, Bob decided to change the name to PowerPoint, which became the final product name.

In 1987 appeared PowerPoint 1.0 for Apple Macintosh. He worked in black and white colors. Soon there were colored Macintosh and new version of PowerPoint wasn't long in coming. Software Guide from the first edition has been unique. It was a blue book in hardcover. The company Forethought believed that it is better than a lot of executable help files on the computer and electronic manuals. But the manuals upgrade was unreasonably expensive. The idea of such books was soon forgotten.

Later, in 1987, Forethought and its product were purchased by Microsoft for \$ 14 million. In 1990 version for Windows appeared. Since 1990 PowerPoint has become the standard in the set programs of Microsoft Office.

In 2002 he released the version of PowerPoint that not only was included in the package of Microsoft Office XP, but also was spread as a separate product. It has the following functions such as comparison and mixing changes in the presentation, the ability to specify animation ways for individual shapes, create pyramid, radial and target charts, and also Euler circles, taskbar for viewing and selection objects of clipboard, presentation protection with password, automatic generation of photo album, as well as "smart tags" for quick selection of the text format, copied in the presentation.

Microsoft PowerPoint 2003 is not too different from the predecessor. It increases the efficiency of the group work and now has the ability to create the "Package for CD", which allows to copy presentation with multimedia content and review it on CD.

The version of PowerPoint 2007 brings major changes to the program interface and increases graphical capabilities.

PowerPoint is part of Microsoft Office. It allows PowerPoint to become the most widespread worldwide program for presentations creation. PowerPoint presentation files often sent by the program users to other computers, which mean the necessary compatibility with rivals' programs. However, since PowerPoint has the ability to connect items to other applications through OLE, some presentations become hooked to the Windows platform, that makes impossible to open these files, for example, in the version for Mac OS. It has led to the transition to open standards such as PDF and OASIS OpenDocument.

For creation multimedia presentations, **the Russian-language version of PowerPoint**, which is part of the integrated package of MS Office, is the most common in Ukraine. With the help of this application, the presentations consisting of slide sets in which the text is combined with graphic objects, photos, sound, video and animation effects, are created. The slides can be presented in the strict black and white range, as well as in the form of color images. For this purpose, is used design templates created by professional designers. The templates can be created individually.

The slides can contain:

- text;
- tables;
- charts, including organizational;
- pictures;
- videos;
- sound (music or voice);
- hyperlinks to other slides and documents (presentations, tables, charts, etc., that are on the computer or in the Internet).

Some slide objects can have animation effects.

As PowerPoint is a part of Microsoft Office, while preparing presentation, fragments of Word documents, spreadsheet tables, Excel charts and Access data can be used. Slides, created in PowerPoint, can be immediately reviewed and, if necessary, changed.

The PowerPoint presentations are demonstrated:

- on the monitor for a small number of people (including the Internet);
- on the screen with the help of multimedia projector;
- on the screen with the help of overhead projectors, using transparent films;
- on the screen with the help of slide projectors, using a 35-millimeter slide films;
- as printouts on the paper.

11.8.2. The overview of PowerPoint deployment

PowerPoint is a part of Microsoft Office, so it has features shared with other Office applications. For example, PowerPoint is starting just like any other application, – via the **Start** Menu or by using the Office Panel, or by double-clicking on its shortcut or on pre-prepared presentation.

PowerPoint is used for making presentation and demonstrating it. In the preparation mode of presentations (normal, slide structure and sorter) the PowerPoint window resembles the windows of other applications, i.e. has a title bar, menu bar, toolbar, working area and status bar. The peculiarity of PowerPoint window in these modes is that there are Slide Show modes

buttons to the left of the horizontal slide (fig. 3.4). These buttons duplicate the appropriate menu command "View" and are similar to the Word buttons. In the Slide Show mode window occupies the full screen, and only one slide can be review.



Fig. 3.4. The buttons of review slides modes

PowerPoint has several **modes of operation**:

1. The normal mode. In this mode the working area of PowerPoint window consists of the slide sections, structure and notes (fig. 3.5). The size of each of them can be changed. The structure area shows number, slide title and the text contained in it. By clicking on the button to the left of the number, you can immediately switch to the corresponding slide that appears on the slide area. Here can also be inserted pictures, movies, sounds, animation effects, and hyperlinks. The text is typing on the structure area and on the slide area.

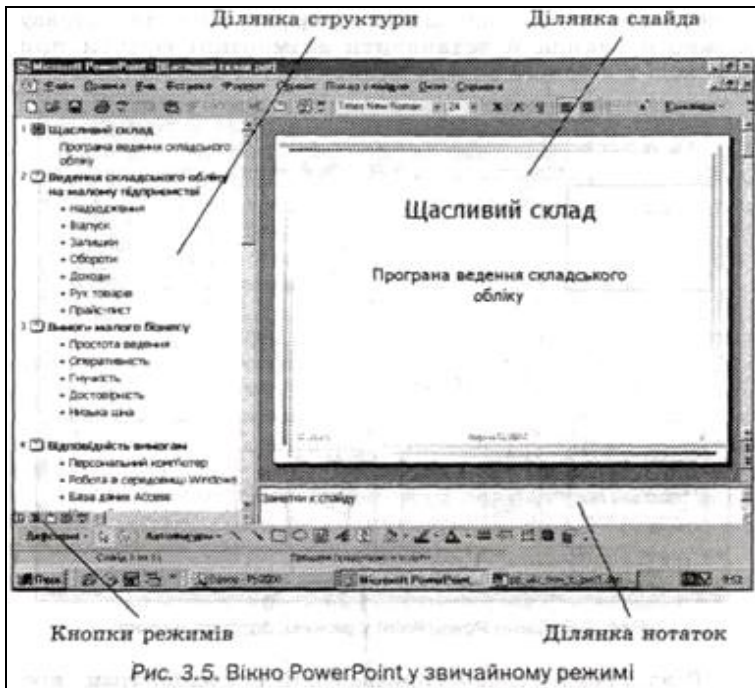


Рис. 3.5. Вікно PowerPoint у звичайному режимі

2. Structure mode. In this mode the preference is given to the structure area. Other areas are available at the reduced view. Therefore, it is used to get acquainted with the structure of the whole presentation and, if necessary, change it (by moving the sections, deleting them, editing text, etc.).

3. Slide mode occupies the whole working area. Is used for creation and changing the current slide.

4. The Slide Sorter mode. Here on the PowerPoint working area shows the whole presentation, and each slide is displayed in the reduced view. That is why it is used to view the order in which slides are situated in the presentation, as well as to go to the certain slide. It is enough to double-click on it. In the Slide Sorter mode, it's convenient to move a separate slide to another place of the presentation by dragging it with the mouse. There is also an ability to add new slides before the committed or delete committed slide by pressing <Delete> button. At the stage of the demonstration preparation this mode is used to set the time intervals to display each slide and set the animation effects in the transition from one slide to another.

5. The Slide Show mode is intended for presentation demonstration. In it, each slide is displayed on the full screen.

Using buttons (fig. 3.4), it can be switched from one mode to another during the preparation and demonstration slides, as well as when making and editing notes. In the Slide Show mode the current slide is on the full screen, so you can exit it by pressing <Esc> button or by choosing the appropriate command from the context menu that is invoked by right-clicking anywhere on the slide.

To complete the work in PowerPoint just close its window.

11.8.3. Comprehension Questions

1. PowerPoint assignment.
2. What can the slides contain?
3. What PowerPoint presentations are demonstrated?
4. The modes of PowerPoint.

11.8.4. The creation of presentation

The main ways to create a presentation

After choosing the presentation topic, outlining its main issues, as well as choosing material for its disclosure (text, figures, charts, etc.), it can be moved on to the stage of creating presentation. After starting PowerPoint, the dialog box appears in which to do this is offered to choose one of the following ways:

- using the "AutoContent wizard";
- on the template presentations basis;
- on the empty presentation basis.

The steps of creating presentation using "AutoContent wizard"

"AutoContent wizard" automates the transition from one stage of the creation presentation to the next one from the following list:

- 1) the presentation view;
- 2) the way of presenting;
- 3) the format of displaying;
- 4) additions.

During the starting of it, first it must be chosen the type of presentation from the existing list ("Services", "Projects", "Business", "Personal", etc.), as well as the subtype (template) inside the chosen type (for example, in the "Services" there are "General Meeting", "Company main page", "Financial report" templates).

After choosing the type of presentation, the second step is indicating the way of its presenting (demonstration):

- report, meeting, publishing;
- Internet, stall.

On the third stage the format of displaying is determined. The first way of presenting may have 4 view variants:

- the presentation on the screen;
- the black and white transparent films;
- the color transparent films;
- the 35-millimeter slides.

It also decides whether printing for this format will be used.

The additional data for the title slide is added on the fourth stage:

- the title of the presentation;
- the author's name;
- the other data (e.g. the subdivision name).

If on the second stage is chosen the second way of presenting the presentation (Internet, stall), then the third stage is omitted, and on the fourth one is indicated:

- the copyright text on each page;
- last-modified date;
- e-mail address.

Then the standard template is adjusted by replacing the data there.

The creation of the presentation based on a template and on the empty presentation

If the presentation is created **based on a particular template**, then in the "Presentation" tab the proper view is chosen, such as «Financial report»,

and then fills it in with the necessary data. When choosing, pay attention to the fact that many templates have two versions – standard and interactive. The first is acceptable for reports, meetings or publishing; the second – for Web-pages on the Internet or stall.

Therefore, the creation presentation based on a template, only the first and second steps of the **Wizard** are automated. All the others are performed in the free mode.

The user even have greater freedom if he choose the template presentation from the "Presentation designs" tab, in which there are only the templates of the presentation physical appearance, created by professional designers. The content, sequence of slide show, etc. the author determines himself.

The user can show the biggest creative ideas by giving preference of the third method that is **based on the empty presentation**. For each slide, at first should choose auto lay-out of the slide (i.e., decide which place fillers it will have), then fill it with demonstrating material and, finally, pick the right design (wallpaper, color gamut, type face, etc.). As a rule, at first create a few slides, fill them with data, choose the appropriate design, and then on its background continue to create a presentation. Such approach requires the greatest professionalism in work.

11.8.5. Comprehension Questions

1. The main ways of creation presentation.
2. The steps of creating presentation with using "**AutoContent wizard**".
3. The creation of presentation:
 - a) on the basis of the template;
 - b) on the basis of the empty presentation.

APPLICATIONS

Appendix A

Trados

Work in TagEditor (on English examples)

1

The preparation of Translator's Workbench

The start of the program Translator's Workbench:

1. On the **Windows Taskbar** open **Start** menu.
2. Choose **Programs – TRADOS 7 – Translator's Workbench**.
3. Create on the desktop shortcuts for **Workbench** and **TagEditor**.
4. Set the size of the program window approximately on the third part of the screen top.

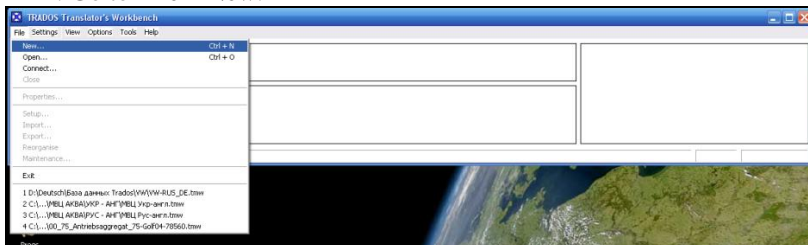
2

The creation of new file-based translation memory

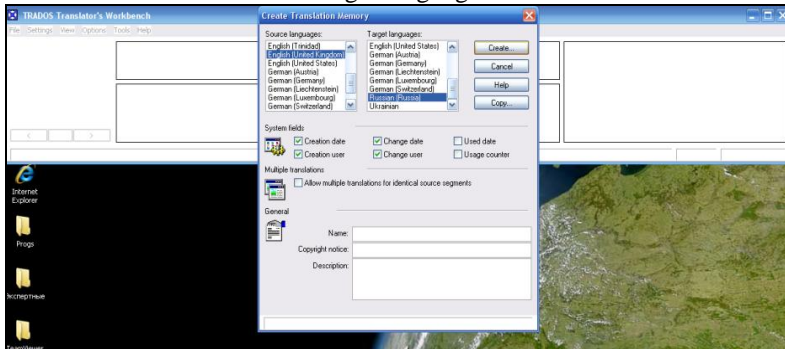
If there is no translation memory, which could be used in the translation project, it is necessary to create a new, empty translation memory.

In Translator's Workbench is created a translation memory for the required language pair (source language – target language):

1. Go to **File – New**.



2. Choose the source and target languages.



3. Choose **Create**.

Next:

4. Go to the directory in which it is necessary to save the translation memory (for example, Translation memory).

5. Enter the file name (e.g., English-Russian) and then click **Save** button.

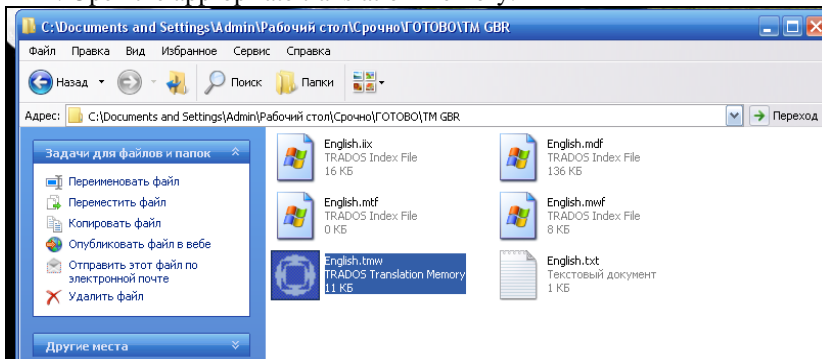
A new empty translation memory based on the files is created, and the translation can be started.

3

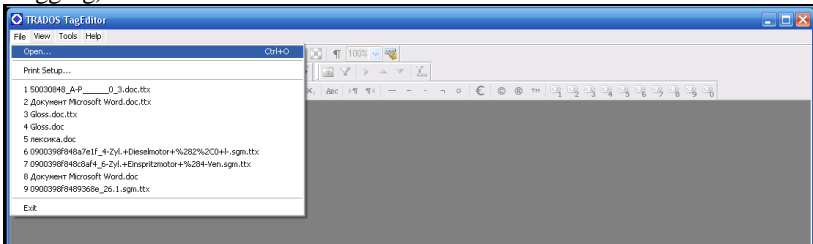
The translation with using TagEditor

The beginning of the translation file with tags:

1. Open the appropriate translation memory.

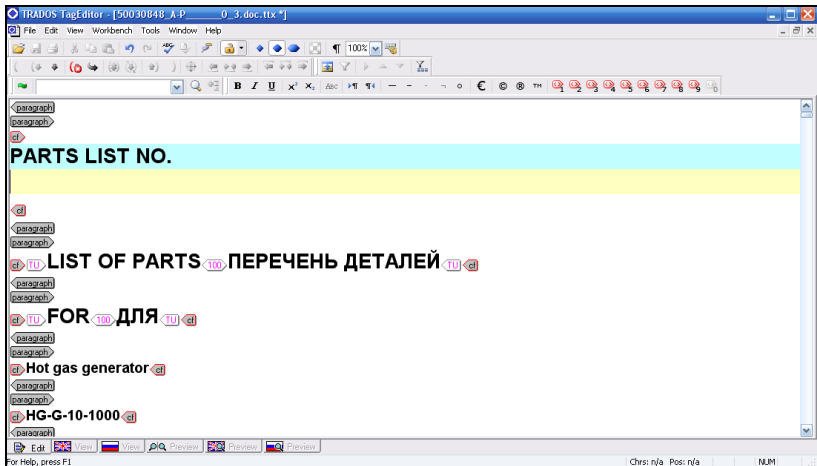


2. Open TagEditor and file that is subject to translation (can just be dragging).



3. To start translating click **Open/Get**.

4. Enter the translation.



5. To move to the next segment press **Set / Close Next Open / Get** button.

The searching execution by using the function Concordance

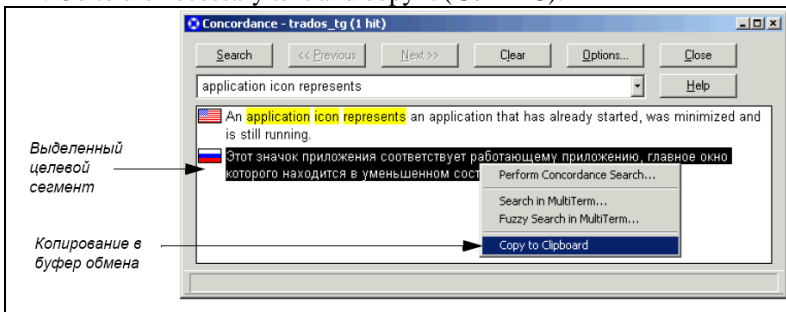
1. In the source field of the blue color in Word, highlight the required segment. The **Concordance** button lights up.

2. Click **Concordance** button.

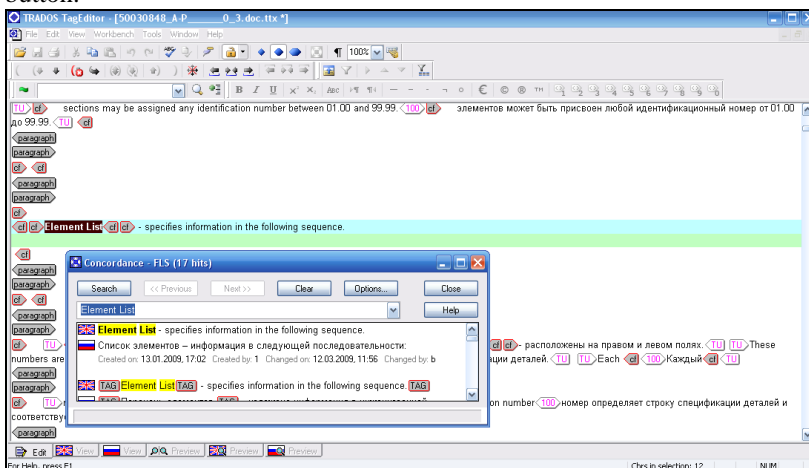
3. In the **Concordance** window will display all translation units containing in this segment. The required segment is highlighted in yellow color.

Copying the text from Concordance window

1. In **Concordance** window, highlight the target text.
2. Go to the necessary text and copy it (**Ctrl + C**).



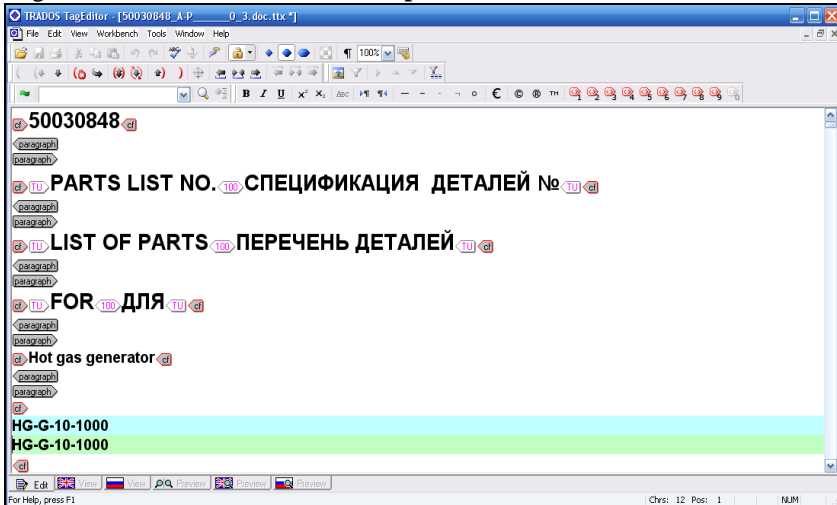
3. Place the cursor in the yellow target field.
4. Paste the copied text into the translation line (**Ctrl + V**).
5. Make any other changes or additions, and then press the button **Set / Close Next Open / Get** to continue.
6. After completing the work close **Concordance** by clicking **Close** button.



Copying the source text

Some segments, such as e-mail address, are not subject of translation (see below). In such cases, use the **Copy Source** button. When you click it

Workbench fully copies the source segment and inserts it in the yellow target field. Click **Set / Close Next Open / Get** and continue the translation.



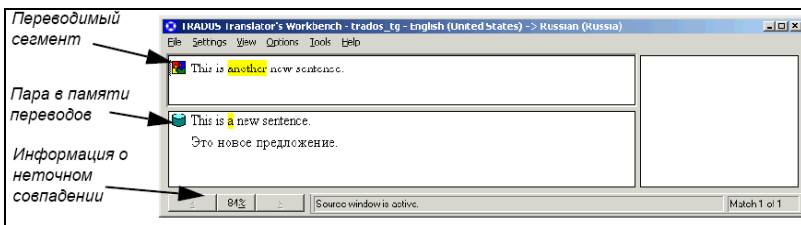
Fuzzy Match

The **Fuzzy Match** takes place when identifying the **Workbench Translator's** one or more segments, partly match, but not identical to the translating segment. **Workbench** puts the translation from the closest match to the target yellow field.

In the status bar **Translator's Workbench** the percentage of fuzzy match is indicates.

Fuzzy Match as a result of word change

In the following example **Workbench** searches in the translation memory and finds the similar segment. The only difference between the translating segment and the segment in the translation memory is one modified word, and **Workbench** highlights this word in yellow.



Correct the translation in the yellow target field and click the **Set / Close Next Open / Get** button to save the translation and go to the next segment. **The omission of 100 % matches by using the "Translate to Fuzzy" function.** To speed-up the interactive translation process in **Translator's Workbench** provides the ability of automatic insertion of translations for 100 % matches and stop on the fuzzy match or in its absence at all. The appropriate button is called **Translate to Fuzzy**.

NOTE

This function is especially useful while translating document that contains a large number of repetitions. After the translation of any segment each time, when this segment appears again, it is considered as 100 % match.

The translation of the text is finished.

4

Saving the file in TagEditor: 1. Check that no one translation unit is open. 2. Click flexible disk **Save**. Bilingual file is saved by default with the **.ttx** extension. This kind of file in **TagEditor** corresponds to unrefined files in Word. These files **.ttx** contain both the source and target segments. The output segments and dividers are deleted after the completing of the translation and editing.

NOTE

To point a new name for the file **.ttx** is not required, because the initial extension is not rewritten. **.ttx** extension is automatically added to the input name and the file extension.

5

The function of tags checking

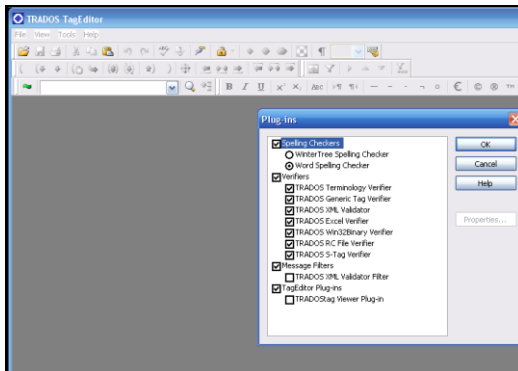
1. In the **Tag Editor**, open the document that you want to check.
2. In the **Tools** menu, choose **Plug-ins**.
3. In the **Plug-ins** dialog box, choose the check-boxes in front of all **Verifier** sub-items.
4. After completing the settings, click **OK**.
5. In the **Tag Editor** from the **Tools** menu or through the toolbar, start the **Verify** command.
6. The tags checking will be fulfilled.

If there are errors in the document formatting, they are highlighting at the bottom of tag-editor.

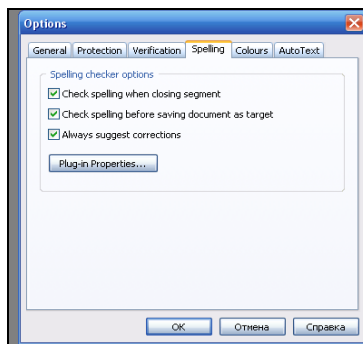
Click the right mouse button on the error. Appears the inscription **go to location**. In the original text, the tag, that should be inserted, is highlighting. **How to insert the tags:** a) use the **copy source**, re-enter the translation, paying attention to the tags; b) leave the cursor at the place of the omitted tag and click **get current placeable** button.

6

Spell-checking in TagEditor: 1) To activate the spell-checking in **TagEditor**, go to the **Tools** menu, choose the **Plug-ins** point. Choose the checkbox in front of the option **Spell checkers** and choose **Word Spelling Checker**. Click **OK**.



2) Spell-checking settings:
tageditor – TOOLS-options-spelling-check spelling when closing segment.



Now, after the segment closing, the spell-checking will be performed automatically.

7

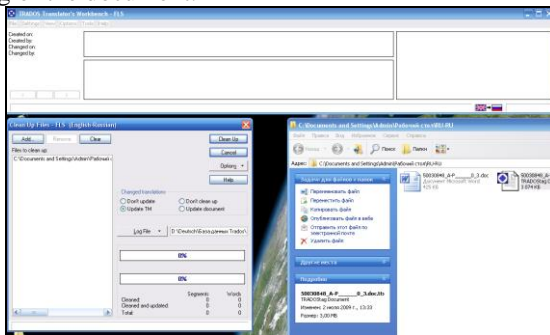
File cleaning

Applying the Clean Up function to the translated file

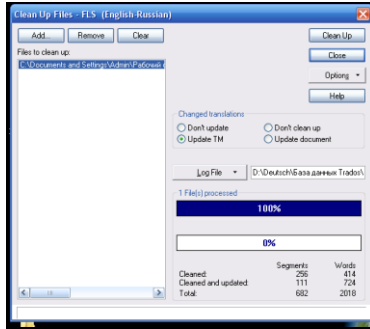
After the translation completing, editing and proofreading of the document, the source text and dividers should be deleted and highlighted the text with color. This option is performed by using the cleaning function – **Clean Up**, which is the last step of the translation process.

Starting Clean Up function: 1. Save and close the document in Word. 2. In the **Workbench**, open the memory that is used in translation, and then choose **Tools – Clean Up**. 3. Click **Add** button and choose the document(s) for cleaning. 4. On the **Changed Translations** tab choose **TM Update** option: changes that made in targeted segments of translation units in the document are transferred into the translation memory.

The option **Update TM** allows to update the translation memory by saving in it all changes made in the translation during editing and proofreading of the document.



5. After choosing the appropriate options, click **Clean Up** button.



6. When the cleaning up is completed, click **Close** button.

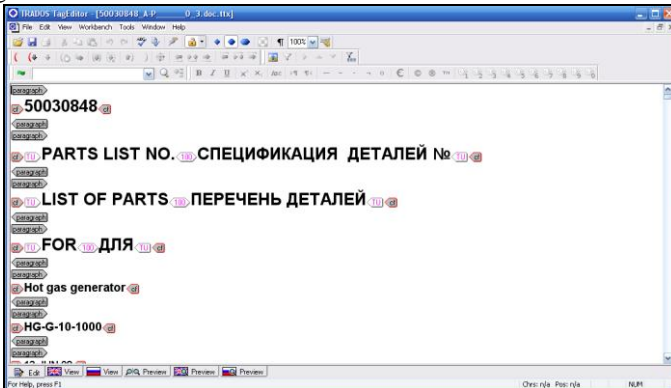
7. Open the document(s) in Word and check whether the cleaning up was successful or not.

8

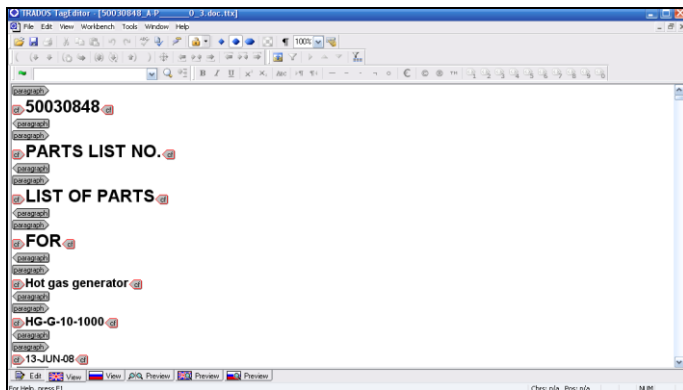
Additional functions

The view options

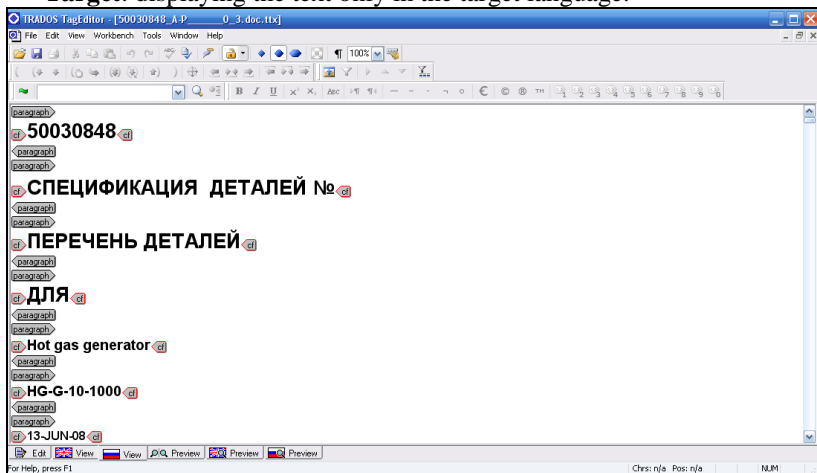
The **TagEditor** provides a number of view options. These options are available in the **View** menu (**ViewMode** and **Preview Mode**), as well as on the different tabs at the bottom of the **TagEditor** window, in which any document is opened. **Edit**: displaying the source and target texts for the editing.



Source: displaying the text only in the original language.



Target: displaying the text only in the target language.



NOTE

If the translation unit is open, all of the view modes, with the exception of the Edit mode, won't be available. To preview the document in the other view mode, all the translation units should be closed.

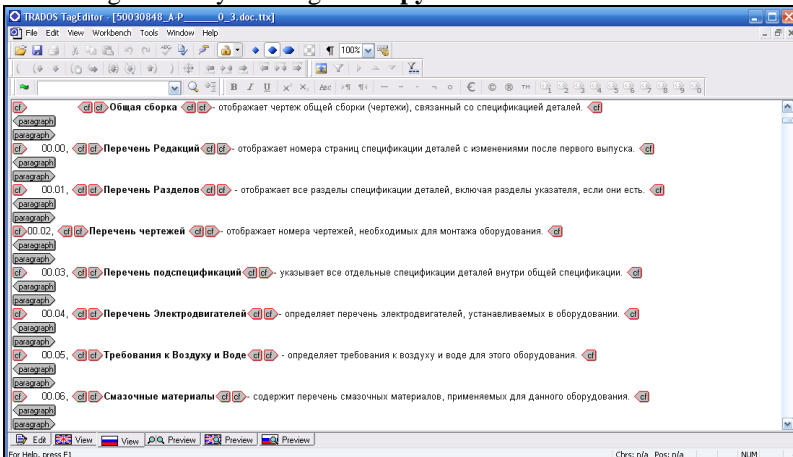
External tags (gray)

The **External tags** usually represent the structural elements of the document, for example, paragraph styles, inserted objects and tables. They are used to form the basic structure of the file, aren't moved and rarely added or removed in the translated files. These tags usually are at the

beginning of the line. In **TagEditor** these tags are highlighted with **gray color (in the black frame)** and are ignored during translation.

Internal tags (red)

The **Internal tags** represent the text formatting, for example, special characters and some punctuation marks. Most internal tags can be moved to change the formatting of the sentence, as well as add or delete according to the translation. Usually these tags are in the text of the paragraphs that are translated. In **TagEditor** these tags are highlighted in **gray (in the red frame)** and are not the subject of translation, but should be correctly inserted into the target segment according to the translation. The internal tags are recognized in the **Workbench** as **placeable-elements** and inserted into the target field by clicking the **Copy source** button.



The function of the Expand Segment

In some cases, it may be necessary to translate two source sentences into one target sentence and save the resulting translation in the memory. In **Translator's Workbench** to add the next sentence(s) to the currently open translation unit one uses the segment extension function – **Expand Segment** in the **Trados** menu in **Word**.

For example, in **Translator's Workbench** the sentence "Type following command: TW4WIN RUN X745369-7869678." does not open fully, because by default there is a stop on the colons.

```
{0}>
Type the following command:
<}>
TW4WIN·RUN·X745369-7869678.
```

For adding to the open segment of the text "TW4WIN RUN X745369-7869678", the following after the colon, choose **Trados – Expand Segment** in Word. Workbench adds further text and stops on the next full stop, colon or symbol of the paragraph ending. During each extension of the segment in **Translator's Workbench**, the automatic search of a new changed segment in the translation memory is starting.

NOTE

The segment cannot be expanded beyond the paragraph ending character .

The Shrink Segment function

In some cases, in Translator's Workbench is opening the larger segment than it's necessary. For the segment breakdown in Translator's Workbench into smaller parts using compression function of the segment – **Segment Shrink** in the **Trados** menu in Word. For example, in **Translator's Workbench** two sentences are opening together, because a date is at the end of the first sentence.

```
{0}>
The contract was signed on 2/2/00. The plane arrives at 10.45pm.
<}>
<0}>
```

For a breakdown of these sentences, go to the **Trados** menu and choose **Shrink Segment**. **Workbench** modifies the size segment by splitting it to the full stop or to the colon. During each extension of the segment in **Translator's Workbench**, the automatic search of a new changed segment in the translation memory is running.

Appendix B

OmegaT

The installation of OmegaT

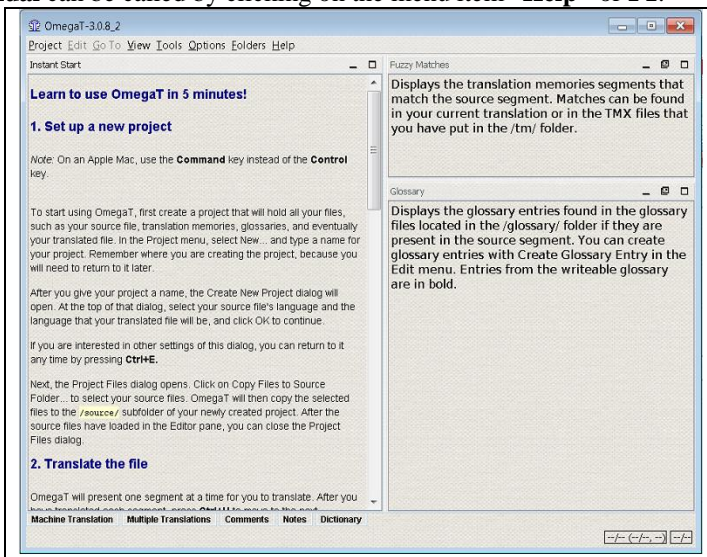
After downloading the **zip** file, it is placed in the appropriate folder, for example, for Windows, **C:\Program Files**. Unpack the zip archive.

After downloading OMEGAT (Windows Version), start the **.exe** file and follow the on-screen commands that do not require the explanation.

OmegaT user's interface

After starting **OmegaT**, the main **OmegaT** window with three main areas should appear: the area of the **Editing** window, the area of the **Fuzzy Matches** window and the area of the **Glossary** window; and five optional fields: **Machine Translation**, **Multiple Translations**, **Notes**, **Comments**, and **Dictionary**. The optional window areas are described in all-encompassing **User's Manual**.

If you don't see all of the main window areas, drag the borders between them on your screen, until they are arranged in the order shown below. **Editing** window area displays the **"Instant Start"** option in English. **User's Manual** can be called by clicking on the menu item **"Help"** or **F1**.



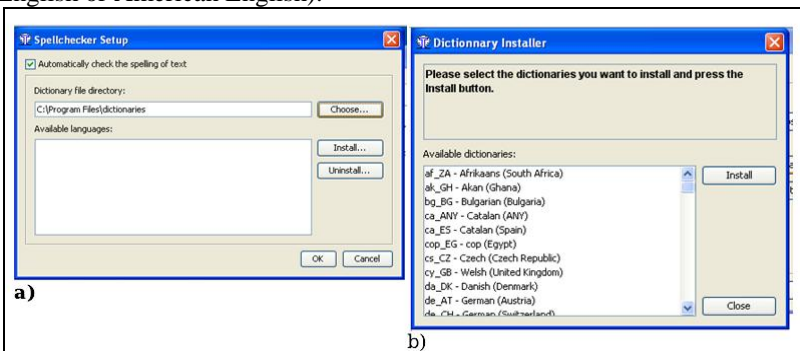
If the **Editing** window area is empty, the language of your Windows installation is probably not English and OMEGAT does not display the "**Instant Start**" option on your language. In this case, overview the OMEGAT documentation, choosing **Help > User's Manual**, or by pressing **F1**.

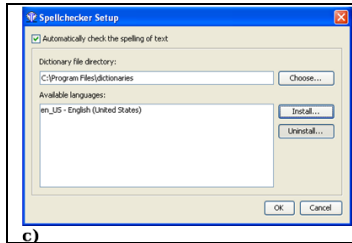
Keep in mind, that the documentation may be a little outdated, due to the pace at which OMEGAT is developing. For some languages, is also a little bit outdated. It is offered to overview the current documentation!

The installation of spelling dictionary

You will need a place to remember your dictionary or dictionaries for your spell-checker in the source language (but it isn't the place for bilingual dictionaries). Example – to create a folder "dictionaries" in your **Program Files (Start > My Computer > Local Disk (C:) > Program Files > right-click > New Folder**, call it "dictionaries.") Then click **Options > Spell checking** from the OMEGAT menu. Click **Choose** and go to the folder "dictionaries". (the screenshot **a**) below). Click "**Install new dictionary**" and you will get a list of the possible dictionaries **b**). (If nothing happens, then choose the second archive – see www.omegat.org/en/howtos/spelling.html).

Click on the chosen or on any other dictionaries you want and click "**Install**" again, then close the section. Choose the dictionary and click "**Install**" to download the appropriate dictionary from the Internet into the folder you have specified). Of course, you must be connected to the Internet to use this function. You'll see that the dictionary or dictionaries will appear listed in the "**spellchecker setup**" window **c**). Make sure that the version of your dictionary language is matching the language variant of your source language, or the spell-checking won't work properly (for example, British English or American English).



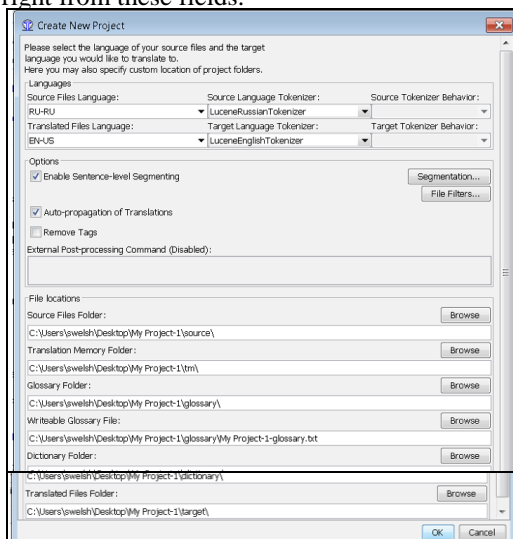


The project creation

Most CAT-programs use the term "project" to refer to the whole number of the folders and files that are connected with the translation. "Project" is usually synonymous with translation work.

To create a project in OMEGAT, choose **Project**, and then click **New**. The **"Create a New Project"** window is appeared (aren't shown here). Move to the folder in which the project will be created, for example, the main folder that you use for your translations, or you can place it on the **Desktop** for temporary easy access, and later move it to **My Documents** or other similar location of saving.

Enter the appropriate name for your project, such as customer's name and delivery order number, and then click **Save**. In order to refer to the project, call it **My Project-1**. The **"Create New Project"** window will appear. Choose the desired source and source languages by clicking on the arrows to the right from these fields.



Click on "**Segmentation**", to call the **Segmentation Setup** window. OMEGAT is provided by a number of the most basic segmentation patterns. Choose the language that matches the language of your original text (for example, Italian), and use the "**Move Up**", to move it to the top of the list. If the language of your original text is not listed, choose the language, i.e. double-click on the **Language Name** field, and change it to the abbreviation for your language. Do the same with the **Language Pattern** field.

If you use OMEGAT in future for some time, it would be useful to set up the segmentation rules. But you should not stop on the fine segmentation rules at this stage; main rules that ensure the program should work adequately for demonstration, even for different (source) language, providing punctuation of a sentence, which are widely spread for many languages and is similar (i.e., the rules of the Japanese segmentation are not used, if you translate from Italian).

Confirm the segmentation rules, and then create a new project by clicking **OK**. Do not change any other settings in this project. Do not click on the "**Browse**" because you can change the default location of the project folders (directories). Now you have created an empty project.

The "**Project Files**" window, which is empty, is displaying, because your project does not yet contain any files. (Do not use the function "**Import Source Files**" at this stage; you can experiment with it later for yourself.) You can close this window.

Find your project in your file system: this is the folder with the project name that contains the folders **/dictionary**, **/glossary**, **/omegat**, **/source**, **/target**, **/omegat**, and **/tm**, and **/glossary**. They are empty. You need to put your document that you want to translate in the folder **/source**; folder **/target** will be filled with your translated text; now do not need to apply the **folder /omegat** folder; **/glossary** and **/tm** files will remain empty until you create **.tmx** file and glossary and do not put them in the appropriate folders; in the folder **/dictionary**, if you want, you can put bilingual dictionaries, in the appropriate format (see **User's Manual**).

Translation

In this manual for work with OMEGAT two projects for self-training are provided. First, for the beginning, uses a simple MS Word file in input language that demonstrates the full OmegaT capabilities, but intends to help the "beginners" to understand the most important procedures. The second

project uses the HTML file or many files that are downloaded from the Internet, and demonstrates the OmegaT ability to deal with graphs, complex setting, and complicated file structure. There you will learn how the translation memories, glossaries, and search functions work. These capabilities can be used without looking at the file type (.docx, .xlsx, .txt, .odt, .html, etc.). Look at **B.1-B.4** below. We omit them in **Project 1** only for educational purposes. **Please, go to the Project 2 after completing the Project 1!**

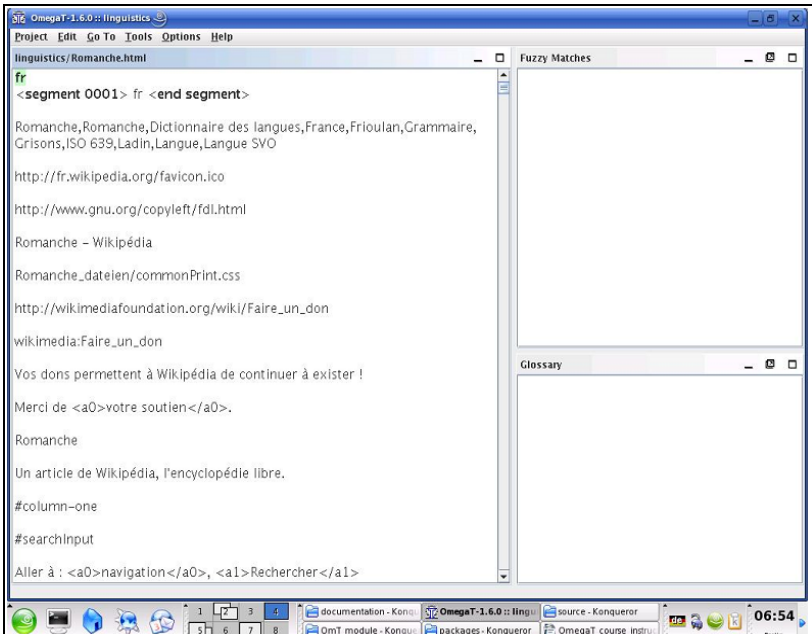
Important remark: the purpose of this manual for work with OMEGAT is to familiarize with the basic concepts of translation memory software. Links to more advanced or obscure OmegaT functions were deliberately omitted or minimized, so their description is almost certainly going to be difficult for you, as a new user, which "is not able to see the forest for the trees". For the further information refer to **User's Manual**.

A. Project 1: Simple file MS Word

Run **Open Office Writer** and create a new text document. Then use **File > Open** to choose and open any short MS Word document (.docx format) on the input language. It should include at least some formatting, such as the title, subtitle and different fonts. (During working with this project you can use.docx files according to this procedure, although actually.docx files don't require **Open Office Writer** mediation.) (Please refer to **User's Manual**, when you are ready to know some of the subtleties.) Using **File > Save As**, name the file and close it in.odt format. Click and drag the newly created.odt file to the/source folder of your **My Project-1** folder, that you've already created.

Start **OMEGAT** and click **Project > Open**. Move to **My Project-1** (it will have the OMEGAT icon next to it). Double-click on the file. The **Project Files** window will display your original document. Close the dialog box. Your translation file currently appears in the **Editing** window, and you can start the translation.

(Note that the screenshot displays OMEGAT 1.6.0 on blue line at the top. Due to the pace at which OMEGAT develops, screenshots and some other information may have slightly changed.)



The basic idea is that the text is submitted to one segment for your consideration. The segment usually corresponds to one sentence. You type your translation in the provided field, confirming it by pressing **Enter**, and so on. OMEGAT has a "built-in" translation memory application. It means that you see only one copy of the text; segments that have already been translated appear as examples, on the opposite side the untranslated original text is displayed. Only with the "active" segment, which is highlighted, will appear both the original text and the translation.

By default, the original text is inserted into the target text segment. It's easy with highly marking (formatting) text, because it's easier to keep tags intact, which are close to the text, simply changing the text between them. When you have the text, which is less tagged, you can delete the field content in the target text and just type the translation, or you can instruct OMEGAT to leave this field empty by default (for more information see **User's Manual**).

A.1. Tag processing

Tag processing requires some practice. The general principle is that you are translating the text between the tags and leave the tags intact. For example, the following text in English

Look at **that**!

may appear approximately like this in OMEGAT:

Look at <a0>that</a0>!

and be translated into German in OMEGAT in the following way:
Schau dir <a0>das</a0> an!

which will then appear in the final text as follows:
Schau dir **das** an!

In this case, <a0> and </a0> are open and closed bold tags consequently. "<a0>" and "</a0>" isn't exactly indicate the beginning and end of the bold; if the word "which" was typed in italics in the original text instead of bold, tags would be the same. Only review the original text you can find out the actual function of the tags in a particular case.

The current file formats of Microsoft Office (.docx, .xlsx, .pptx) can generate a large number of unnecessary tags, making the translation cumbersome. There is one decision for this problem – **Codezapper** (<http://asap-translation.com/CodeZapper>), which can eliminate unnecessary tags, keeping the ones you really need; or you can use the OMEGAT **Remove Tags** feature, to remove all tags. (See **User's Manual (F1)**).

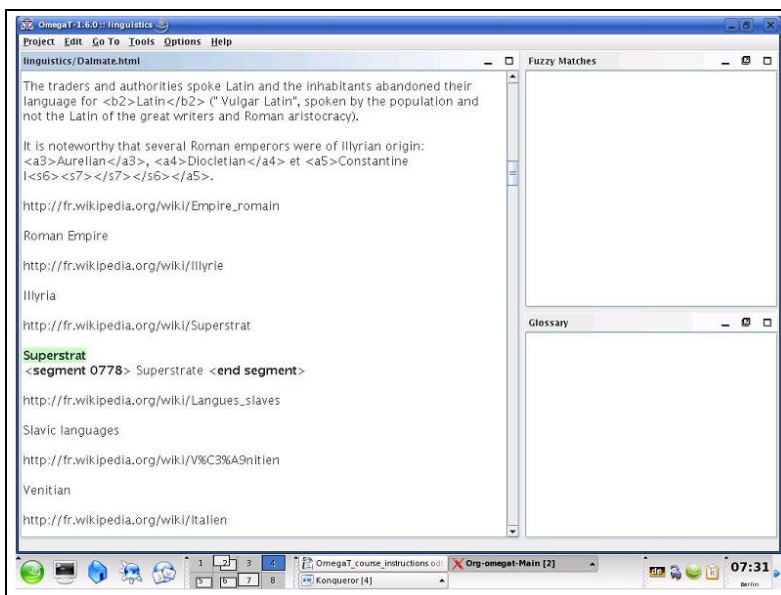
Until you are not familiar with the tag processing, it is better to keep all tags and leave them in the same order, if it's possible. OMEGAT allows you to remove the tags and change their order but only providing the careful following of the certain rules. Otherwise, you risk ruining your final document, and it cannot be opened. (For more information about the tag processing rules, see **User's Manual**).

A.2. Checking your translation

Over time, you will reach the end of the file, i.e. the text you are translating. If your project contains more than one file for translation, that

confirms the last segment in the first file, so it will bring you to the top segment in the second file.

The advantage is likely to be common to all translation memory applications, and it is believed that they simplify the check: once you have completed your first draft translation, you can "walk" through it, having the original and target versions of each sentence that displayed side by side. In the case of OMEGAT, the input text is displayed above the target text of the active segment, facilitating the comparison:



A.3. Tags checking, creating target documents

After checking and saving translation, newer versions of OMEGAT will automatically check whether you damaged tags while the translation process, or you can do it manually: **Tools > Validate Tags**.

Note: If in the XML file formats, such as, for example, OpenOffice.org, damaged or omitted tags, as a result, it will lead to that the original file will not be able to open at all.

Create the target documents by choosing **Project > Create Translated Documents**. The documents that were translated are automatically generated in their original format in the folder **/target**. If your project consists of several source files, probably in several sub-folders and with the

graphic files, etc., as with the examples in our second HTML-project, the full structure of the files in /source is reproduced in /target.

A.4. Final checking, correction and delivery

If you prefer to check translation on paper, print the target document. But don't make the correction in **Open Office Writer** or in MS Word file: find the necessary segments in OMEGAT (using text search function, which is discussed below, **Step B.4**) and make it there.

After reviewing the text and making some corrections, create translated documents again and close the project.

Now you are ready to send your work. If the client requires the Office format MS, just save the target file in OpenOffice.org in the corresponding format MS (.doc, etc.)

B. Project 2: HTML document

B.1. The download of additional materials

Start OMEGAT and create a new project. Call it **My Project-2**. Install it the same way as you did with **My Project-1**. All of the procedures that are described in **Project 1**, the steps **A.1-A.4**, apply them also for HTML files.

All files chose for translation in this manual are taken from Wikipedia; some projects covering more than one file, to familiarize you with the usefulness of using OmegaT for such structured documents.

The table lists the available Web-pages, which have been designed "inherited" files of our manual:

English to German	construction	en.wikipedia.org/wiki/Wall en.wikipedia.org/wiki/Panelling
English to Italian	russian- miscellaneous	en.wikipedia.org/wiki/Russian en.wikipedia.org/wiki/Russian_American en.wikipedia.org/wiki/Russian_Canadian en.wikipedia.org/wiki/Rusky_Island
English to Italian	yoga	en.wikipedia.org/wiki/Karma_yoga en.wikipedia.org/wiki/nana_yoga
English to Italian	civil- engineering	en.wikipedia.org/wiki/Blind_Jack
English to Polish	construction	en.wikipedia.org/wiki/Wall en.wikipedia.org/wiki/Panelling
English to Polish	poland	en.wikipedia.org/wiki/Lubusz_Voivodship en.wikipedia.org/wiki/Podlasie_Voivodship
English to Polish	medicine	en.wikipedia.org/wiki/Hippocrates
English to Polish	swimming	en.wikipedia.org/wiki/Individual_medley en.wikipedia.org/wiki/World_records_in_swimming
English to Portuguese	russian- miscellaneous	en.wikipedia.org/wiki/Russian en.wikipedia.org/wiki/Russian_American en.wikipedia.org/wiki/Russian_Canadian en.wikipedia.org/wiki/Rusky_Island

Information Technologies in Translation

English to Russian	biocoenosis	en.wikipedia.org/wiki/Biocoenosis en.wikipedia.org/wiki/Phytosociology
English to Spanish	dorset	en.wikipedia.org/wiki/Jurassic_Coast en.wikipedia.org/wiki/Old_Harry_Rocks en.wikipedia.org/wiki/Durdle_Door
English to Spanish	appliances	en.wikipedia.org/wiki/Small_appliance en.wikipedia.org/wiki/Kitchen_appliance en.wikipedia.org/wiki/Major_appliance
English to Spanish	cereal	en.wikipedia.org/wiki/Rye en.wikipedia.org/wiki/Sorghum
English to Spanish	skye	en.wikipedia.org/wiki/Skye
English to Spanish	hilton	en.wikipedia.org/wiki/Hilton_Hotels en.wikipedia.org/wiki/Great_Western_Hotel,_London en.wikipedia.org/wiki/Waldorf_Hilton en.wikipedia.org/wiki/The_London_Hilton_on_Park_Lane
English to Turkish	hilton	en.wikipedia.org/wiki/Hilton_Hotels en.wikipedia.org/wiki/Great_Western_Hotel,_London en.wikipedia.org/wiki/Waldorf_Hilton en.wikipedia.org/wiki/The_London_Hilton_on_Park_Lane
French to English	seine-et-marne	fr.wikipedia.org/wiki/Démographie_de_Seine-et-Marne fr.wikipedia.org/wiki/Seine-et-Marne
French to English	esoteric	fr.wikipedia.org/wiki/Augure fr.wikipedia.org/wiki/Divination fr.wikipedia.org/wiki/Effet_Barnum
French to English	dancing	fr.wikipedia.org/wiki/Danse
French to English	cardiology	fr.wikipedia.org/wiki/Cardiologie fr.wikipedia.org/wiki/Tilt-test
French to English	linguistics	fr.wikipedia.org/wiki/Romanche fr.wikipedia.org/wiki/Dalmate
French to English	ornithology	fr.wikipedia.org/wiki/Moineau fr.wikipedia.org/wiki/Moineau_domestique
French to English	wine	fr.wikipedia.org/wiki/Vin_blanc fr.wikipedia.org/wiki/Vin_rouge
French to English	rugby	fr.wikipedia.org/wiki/Rugby fr.wikipedia.org/wiki/William_Webb_Ellis
German to English	canterbury	de.wikipedia.org/wiki/Canterbury de.wikipedia.org/wiki/Canterbury_(Begriffserkl%C3%A4rung)
German to English	domestication	de.wikipedia.org/wiki/Domestizierung
German to English	equestrianism	de.wikipedia.org/wiki/Dressurreiten de.wikipedia.org/wiki/Hohe_Schule_(Reitsport)
German to English	railways	de.wikipedia.org/wiki/Neigetchnik
German to English	music	de.wikipedia.org/wiki/Oberton
German to English	psychiatry	de.wikipedia.org/wiki/Psychiatrie
German to English	humour	de.wikipedia.org/wiki/Fawlty_Towers
German to English	teaching	de.wikipedia.org/wiki/Lehrer
Italian to English	librarianship	it.wikipedia.org/wiki/Biblioteca
Italian to English	politics	it.wikipedia.org/wiki/Gianni_De_Micheli it.wikipedia.org/wiki/Mariano_Rumor
Portuguese to English	chagas	pt.wikipedia.org/wiki/Doen%C3%A7a_de_Chagas
Russian to English	law	ru.wikipedia.org/wiki/%D0%9F%D1%80%D0%B0%D0%B2%D0%BE
Spanish to English	montevideo	es.wikipedia.org/wiki/Montevideo es.wikipedia.org/wiki/Bruno_Mauricio_de_Zabala
Spanish to English	unicef	es.wikipedia.org/wiki/Fondo_de_Naciones_Unidas_para_la_Infancia es.wikipedia.org/wiki/Niño es.wikipedia.org/wiki/Derechos_del_niño
Spanish to English	climbing	es.wikipedia.org/wiki/Escalada_en_hielo

As you have chosen a theme, download the files from the Internet, moving them so that they get directly in the **/source** folder belonging to **My Project-2**. Make sure that you download the entire Web-page, including the graphics. (Different browsers do it differently. For Internet Explorer 7.x, for example, **File > Save As> Webpage, Complete**; for Firefox 5, **File > Save Page as > Web Page, Complete**.)

Your **/source** folder will now contain one or more HTML files, along with related files, such as graphic files. The folders structure and sub-folders should be preserved. You should be able to open HTML files in your browser and access them at about the same time as they appear on the Internet.

Then, download the "**legacy package**" which we have created for using in this manual which is on:

www.omegat.org/training/materials/legacy.zip

Unpack the **legacy.zip** archive in any temporary folder (such as **My Documents** or on the **Desktop**). It contains a number of translation memory files (with **.tmx** extension) and glossary files OMEGAT (with **.txt** extension). Specify the **.tmx** file and the glossary file (**.txt**) for your language pair. Copy the **.tmx** file in the **/tm** folder and the **.txt** file in the **/glossary** folder of your OMEGAT project.

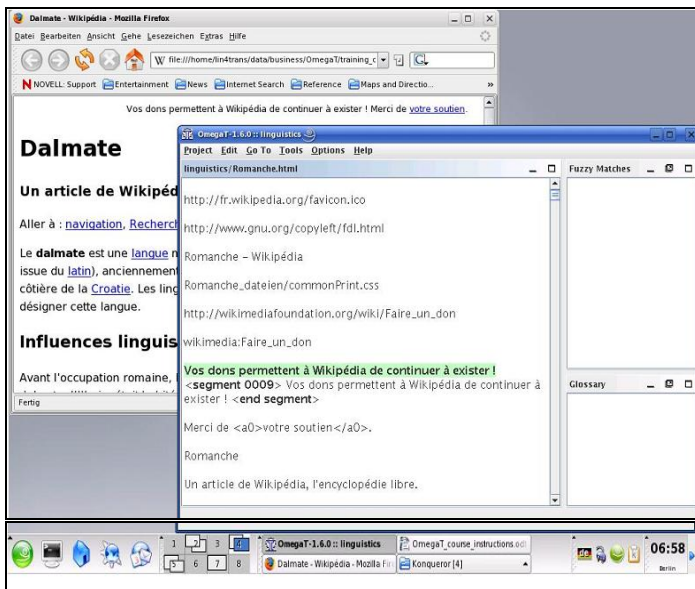
Some other notes about the translation of HTML files:

– If you see these files in your browser on your PC, they are slightly different from the pages on the Internet. There is nothing common here with OMEGAT or with your browser, because Wikipedia doesn't allow downloading on its page all the template information.

– Wikipedia is continuously changing. The pages listed here have been chosen as the appropriate examples (and were created by "**legacy**" files that are relevant to them), but due to the changes, they are less relevant, and they may even disappear or move to another place.

– When you translate from HTML, you'll see a lot of codes which do not need to translate, especially at the beginning of each file. In many cases, entire segments ("sentences"), such as, for example, Web-server links, can be left as they are. Just click on Enter to confirm that the aim remains the same.

– HTML is usually tolerant to damaged or missing tags; probably, as a result, the file is opened, but with unexpected or troublesome formatting results. See Step A.1 about tag processing.



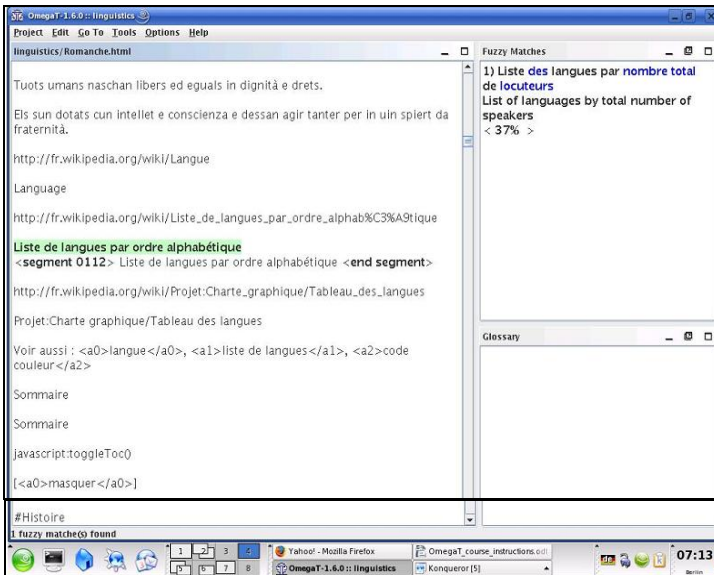
– If the HTML text contains a lot of tags, it may be convenient for you, at the same time, to have the source text open to switch from one text to another (**Alt + tab**) in order to be able to see quickly what text you actually have to translate. As a rule, in this manual for working with *OmegaT* is assumed that if you see something in your browser, it has to be translated. The windows in the screenshot were reduced in size to show the idea of how *OmegaT* and the original text (in your browser), which at the same time is open, remain constant.

– When you have finished and ready to check your work, you can open translated files in **/target** in your browser and read them, and/or print them for checking. If you prefer to read the finished text on the screen, i.e., in your browser, switch over between your browser and *OmegaT*. When you find errors in the text in the browser window, make the appropriate changes in *OmegaT*.

B.2. The translation memory (fuzzy matches function)

Sooner or later, you will come across fuzzy matches. Usually, it happens some time before you have to deal with useful fuzzy matches, and the "**legacy**" translation memory file was given to you in this manual in order to ensure that you'll find at least some matches.

"Fuzzy matches" are segments with some degree of similarity to the segment you are translating. They may be within the current project (or the text that you are translating, or where the project contains more than one original text, or text within the same project), or they may have in the resulting .tmx file that you placed in the /tm folder. As received .tmx files in the /tm folder are the product of previous translations, you won't have any useful information to use it for .tmx files until you have completed some work in OMEGAT, and didn't put the results in the /tm folder of your new work. Here, the current segment shows a fuzzy match with the segment in a different place of the project that you have already translated:



If, after viewing the fuzzy match, you decide that it is useful, you can insert it into the active segment at any time (**Ctrl+I**), or completely replace (write down) an active segment with it (**Ctrl+R**), and then change the segment, or copy and paste the part of matches in the active segment (**Ctrl+C** and **Ctrl+V**).

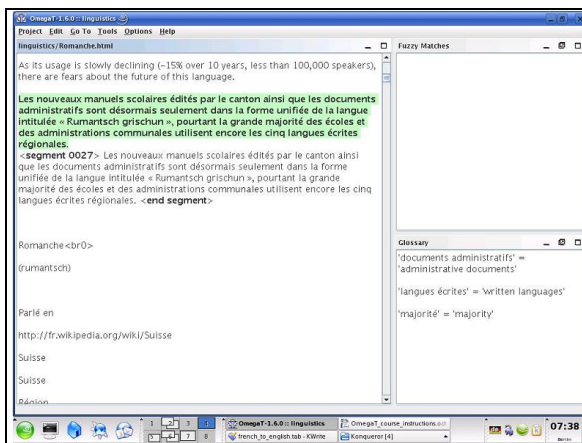
The resulting material provided in this manual, created for the purpose of demonstrating the *OmegaT* functions. Under any circumstances, the translations that are made with the help of translation memory can not be considered as reliable.

In the text, which contains a lot of tags, you will probably see that *OmegaT* makes numerous false fuzzy matches, in which only tags are identical, but which are not useful in future.

B.3. Glossary function

Before you start translating, you put the glossary file in the `/glossary` folder. Glossary files are just simply text files that contain two or three terms columns, separated by tabbings. (See **User's Manual** how to insert glossary.)

OmegaT creates empty glossary file by default when a project is created at the first time. You can also add your own further glossary files. For this project the glossary file (.txt) was created for some pair of languages. While translating this file will have limited practical usefulness for you, but it serves to show you how the glossary terms appear in *OmegaT*, when they occur in the text: in *OmegaT* they immediately appear in the area of glossary window. The terms and their translations will appear when you reach the segment, which contains them.



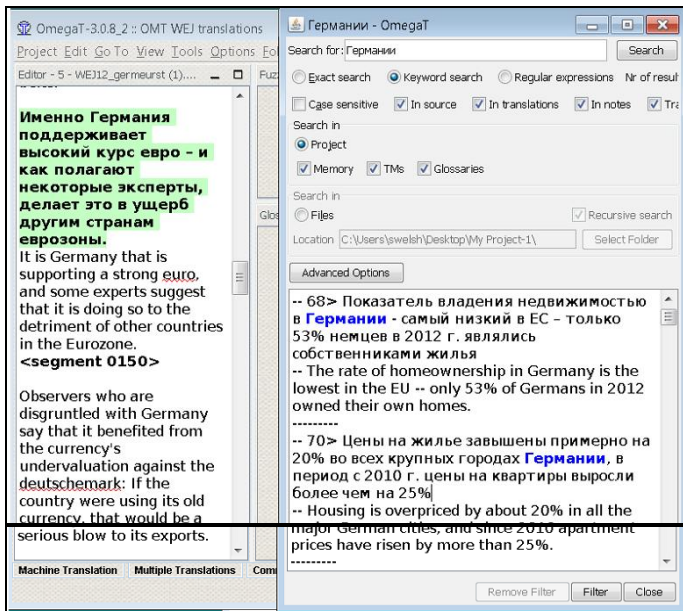
Some amazing characters are unacceptable. Do not put the article before the noun in the glossary; if you want to specify the noun gender, put it after the first tabbing in the glossary, in the column where you put translation. So, if your original document contains the words *ein Mensch*, then the glossary, in the original text of which *der Mensch* will not find it; instead of it, use *Mensch* in the glossary. For more information about the glossaries, including adding new terms, see **User's Manual**.

For more experienced users, there is a supplement to the program called **OmegaT-tokenizers** (for OMEGAT 2.1.1 version and later), that allows *OmegaT* to recognize modified word-forms. Who are interested in it, can refer to **User's Manual** and to the group at Yahoo, assigned for users.

More recent versions of *OmegaT* are automatically combine "tokenizer" function, which allows the system to recognize modified word-forms.

B.4. Text search function

Ctrl+F call a search window in which you can find any term in the project, i.e., within the original text and resulting translation memory files, the original segments, the target segments and the glossary files.



As with the glossary function, you can use a combination of buttons to copy and paste the content from the **Text Search** window in the active translation segment. If you want to change the text in the segment within the current project, which is displayed in the **Search Text** window, double-click on it and OMEGAT switch you to the segment, what is connected with it.

The **Text Search** window has quite powerful search function. To learn more, see **User's Manual**. Pay attention that there is no global automatic replacement function that would be available as an addition to the main program, which is also described in **User's Manual**, but there are "workarounds", which can also be used.

Appendix C

MemoQ is an integrated translation environment

1. General information about the program

Translation environment

MemoQ is a modern integrated translation environment.

While translating, you usually translate a text from one language to another, taking into account the culture peculiarities and the language of translation. Usually the texts are similar; whether you are a manufacturer or service provider, most of your original documents related to the scope of yours activities.

The professional translator often receives similar documents from one client, or various documents on one topic, such as legal documents or the user's guide. The translation environment allows using such uniformity of the documents.

The most important MemoQ components are:

- translation memory,
- LiveDocs corpus,
- terms data-base,
- the translation editor (which performs the text processor tasks).

When you translate a document in MemoQ translation editor – regardless of the document type – the editor automatically monitors of all formatting. The text is divided into segments. In MemoQ the segment is almost the same as the sentence. You move from segment to segment in the translation editor. After the end of segment translation you're adding it in the translation memory.

The translation memory is the normal way to reuse previous translations. It stores the pairs of segments: each pair contains a segment in the source language and its translation. While the text translation the program checks whether the translations memory has a similar sentence to that which you are translating. If there is such sentence, it will be displayed as a match, and in the work area the differences of the current sentence in the memory will be indicated.

In addition to the traditional process of translation, you can directly use the previously translated documents as a translation memory. LiveDocs is a function of MemoQ, which allows creating the documents corpus. In the LiveDocs corpus can be added the documents pairs, bilingual documents and monolingual files. The documents pair contains the document in the source language and its translation. When you add such a documents pair in

the corpus, MemoQ matches the documents: trying to match the source language with its translation, using mathematical tools. After the end of matching segments of the texts and adding the documents pairs into the corpus, MemoQ offers the documents contents matching.

A document pair contains a document in the source language and its translation. When you add such a of document pair into the body, MemoQ compares the documents: it tries to match the sentences in the original language with their translation, using mathematical tools. After segment-to-segment matching of texts and the addition of the document pair to the body MemoQ shows a coincidence of the documents content.

MemoQ uses a quite precise algorithm of segment-to-segment text matching, but discrepancies can still occur. When detecting discrepancies (incorrect matching), you can open a document pair in the editor of the segment-to-segment text matching. After you correct the segment-to-segment of a document pair, MemoQ will automatically offer corrected matches.

When using LiveDocs translation memory or corpus you create a database for whole sentences – or, more exactly, segments, because sometimes the whole paragraph, and sometimes a phrase, which is just a part of sentence, can be a unit of translation. If you want to create an expression glossary, which occurs in the segment, you can use database of terms.

Database of terms contains records with terms – words and phrases – on few languages, and also additional data, if required. Translation editor automatically points out the terms, found in the terms database, and shows their translation as a list, from which you can take it and paste into your translation by just a one-clicking on the keyboard or mouse.

Statistical analyses of the text also plays an important role in translation, as it helps to evaluate the amount of work. Key factor of translation process is productivity.

Productivity is gained when you spend fewer amount of time to perform a translation operation than when you work in a simple text editor saving the quality of your work. MemoQ statistic module analyses text and evaluates the time economy when using LiveDocs translation memory and corpus.

MemoQ is an integrated environment: you work in one program, which provides with all the necessary functions for translation. So there is no need in additionally using of other programs.

Economy

Increasing of the work productivity also depends on the text type quite a lot. If it has a lot of repetitions, like in manuals or technical texts, productivity may increase in 70–80 %. But during the translation of usual texts, like text books, it increases in 10–30 %. Utilizing of this program for

translation of letters may not cause any effect at all. Before starting you work you can look in statistics module, how much time you will save using MemoQ, and evaluate the profitability of investments.

Translators give discounts for texts with repetitions and similar texts. All the translated segments are kept in translation memory together with the equivalents on target language.

MemoQ analyses a text, searches for segments, which are not alike to translated before and determines the grade of similarity. If the segment is already present in LiveDocs translation memory or body – or completely coincides with a text in document – translators are paid just a part of cost, usually 20–30 %. If the segment in LiveDocs translation memory or body is similar, the cost will be higher. So the lower grade of similarity, the higher price is.

MemoQ statistics module provides with an innovative function – it performs the analyses of uniformity. The analyses is performed even when LiveDocs translation memory or corpus, created in previous translations, is missing. It allows to evaluate the amount of work more exactly and provides with profit from MemoQ using both the customer and translator.

2. Installation and system requirements.

Switching the user interface language

English is set as default language of user interface in MemoQ. To change a language:

1. Launch MemoQ, if it is not launched yet. You will see the main window of MemoQ with **Dashboard**.

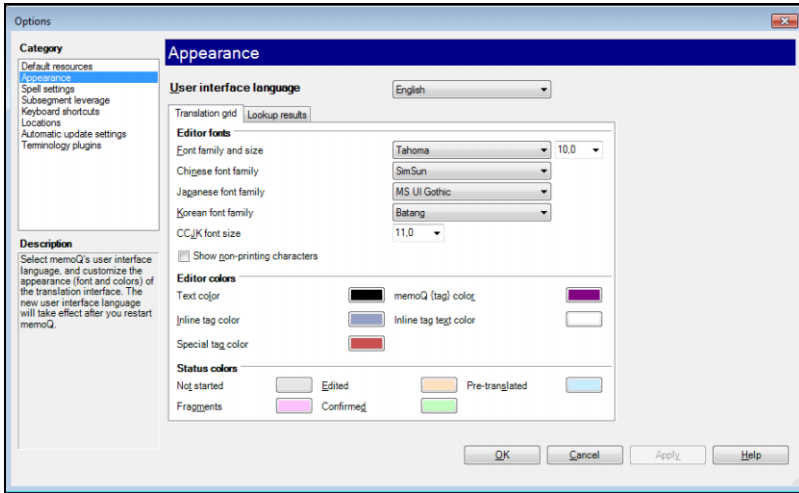
2. In **Tools** menu choose **Options**. Then you will see the window **Global Settings**.

3. In list **Category** on the left choose **Appearance**. In the main area of MemoQ window show the parameters of setting the program appearance.

4. In drop-down list **User**, go to **interface language**, choose the language and press **OK**.

5. Re-launch MemoQ. Commands and messages will be displayed on the chosen language.

Note: you can choose English, German or French as default language. Depending on your location Japanese can also be chosen. New languages are constantly added, so the list of languages will be expanded soon.



3. Translation process

Projects

In MemoQ projects are used for translation offers. Translation project includes the following:

1. Translation documents (unlimited amount – usually up to few hundreds).
2. LiveDocs corpuses, which consist of 2-language documents, documents pairs on source and target languages and binary files (unlimited amount, deleted and local – usually 1 or 2).
3. Translation memories (unlimited amount, deleted and local – usually up to 5 or 6).
4. Databases of terms (unlimited amount, deleted and local – usually up to 5 or 6).
5. Parameters or light resources: rules of segmentation and automatic translation, parameters of translation memory and quality evaluation etc.

Such resources as translation memories, terms databases, segmentation rules, automatic translation rules etc. can be kept locally or can be available through the MemoQ server. These resources can be assigned for few projects. MemoQ registers translation memories, terms databases and other resources, which are kept on your computer and can be used in any project – and even in few projects at the same time.

Translation in MemoQ

Translation process in MemoQ includes following steps:

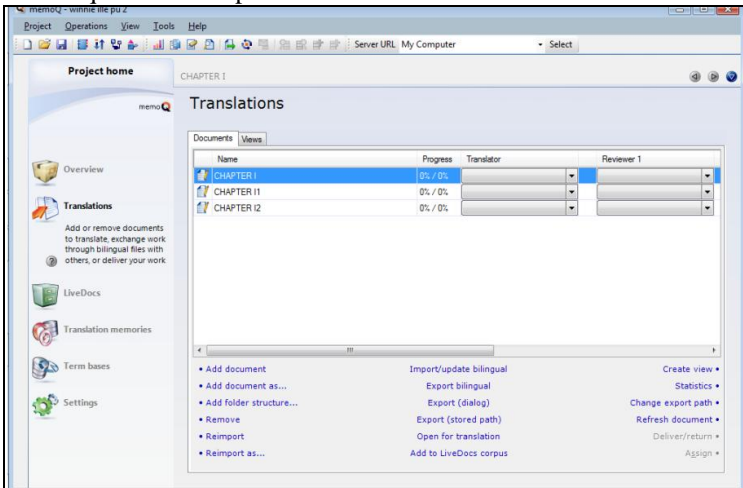
1. Project creating. First you choose the documents for translation, then point translation memories and terms databases. When creating a project MemoQ imports the content of original documents into the working area with a possibility of further export of translation in a form of original document. During the creating of a project new translation memories and terms databases can also be created. Content and parameters of the new project can also be changed if required.

2. Translation. Translation is entered in special text processor, called the table of translation. For each document in MemoQ separate table of translation is assigned, and they are opened on separate page in the window of program. During the translation MemoQ performs automatic search through the translation memories, LiveDocs corpuses and terms bases, assigned for this project. Under one project you can simultaneously edit few documents, but it is impossible to work on few projects at the same time.

3. Delivery. After finishing the translation you choose export command of translated text. Program saves the translated documents on the hard drive in format of original document, using the formatting data, worked out during the import of document. You can export the text on any stage of translation, and then continue working on project even after exporting the translated text.

Switching in MemoQ

During the work in MemoQ content and settings of the project in process are displayed on the tab **Project home**. To switch to another tab you can choose it in the top part of MemoQ window or press **Ctrl+Tab**, until the required tab is opened.



With the help of tabs access to the documents for translation and hard resources drive (terms databases and translation memories) is performed.

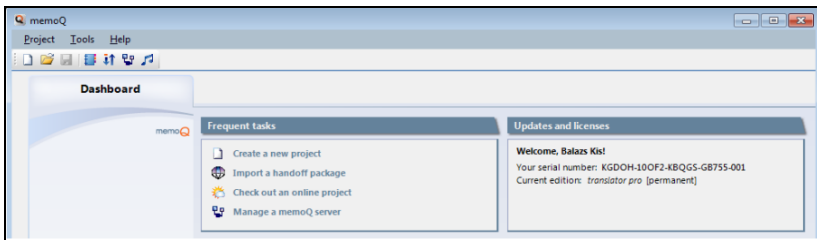
Note: in MemoQ all the parameters are resources – the data, the managers in your work process. Translation memories, terms databases and LiveDocs corpuses are hard resources. Such resources as segmentation rules, automatic translation rules, quality evaluation parameters, spell-checking ignoration lists etc., fewer amount of data are called light resources. The major advantage of using parameters as resources is that they can be saved in file or reuploaded – for example on another computer. It allows to share them with other MemoQ users and, if the certain MemoQ version is present, post files on MemoQ servers.

MemoQ remembers the state of project. If you close MemoQ and open it next day, you will see **Dashboard**, where you can open recent projects. If you choose the existing project, MemoQ will open it with all the tabs, that were opened after you last closed the project and will automatically switch to the tab, on which you were working when you worked on the project for the last time.

4. Creating and changing of the project.

Creating a project

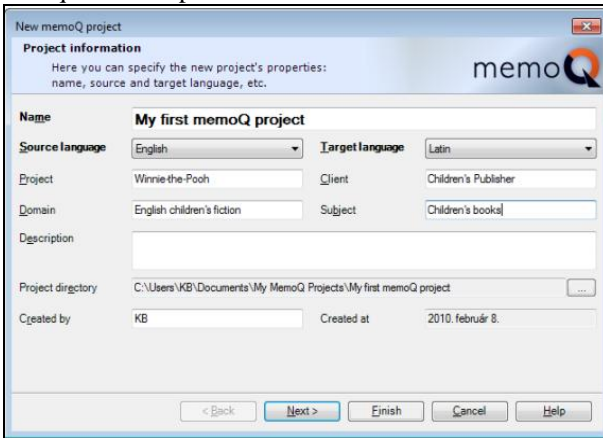
After running MemoQ dashboard is opened. On the dashboard you can see the list of all your projects, information about the current MemoQ license and the most popular commands of the project management. Here the creating of new project starts.



In MemoQ new project wizard is used. To create a project you have to do the following:

1. In menu **Project** choose **New Project**. Or choose **Create a new project** in **Dashboard**. There the first page of **New MemoQ project wizard**.

2. Enter the name of project, choose target and source language. Also you can fill in two fields: **Project, Domain, Client and Subject**. After entering the required data press **Next**.

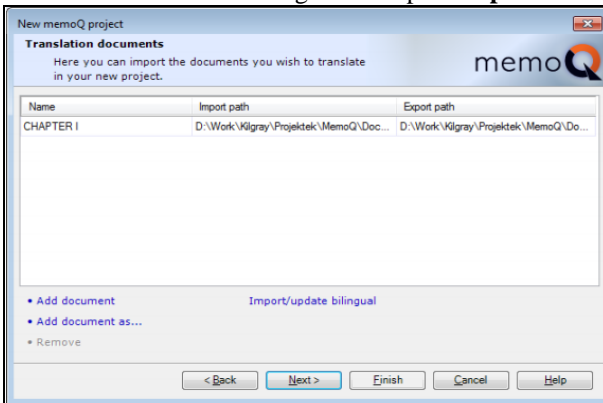


The screenshot shows the 'New memoQ project' dialog box with the 'Project information' tab selected. The window title is 'New memoQ project' and it features the memoQ logo. Below the title bar, it says 'Project information' and 'Here you can specify the new project's properties: name, source and target language, etc.' The form contains the following fields:

- Name:** My first memoQ project
- Source language:** English
- Target language:** Latin
- Project:** Winnie the-Pooh
- Client:** Children's Publisher
- Domain:** English children's fiction
- Subject:** Children's books
- Description:** (empty text area)
- Project directory:** C:\Users\KB\Documents\My MemoQ Projects\My first memoQ project
- Created by:** KB
- Created at:** 2010. február 8.

At the bottom, there are navigation buttons: '< Back', 'Next >', 'Finish', 'Cancel', and 'Help'.

4. On the second page of the wizard you can add the translation document. Choose **Add document** under the empty documents list. Dialog box **Open** will appear: you should point the way to files, that you should add to project, and choose them. You can choose different files of different types at the same time. After choosing the files press **Open**.



The screenshot shows the 'New memoQ project' dialog box with the 'Translation documents' tab selected. The window title is 'New memoQ project' and it features the memoQ logo. Below the title bar, it says 'Translation documents' and 'Here you can import the documents you wish to translate in your new project.' The main area contains a table with the following data:

Name	Import path	Export path
CHAPTER I	D:\Work\Kilgray\Projekttek\MemoQ\Doc...	D:\Work\Kilgray\Projekttek\MemoQ\Do...

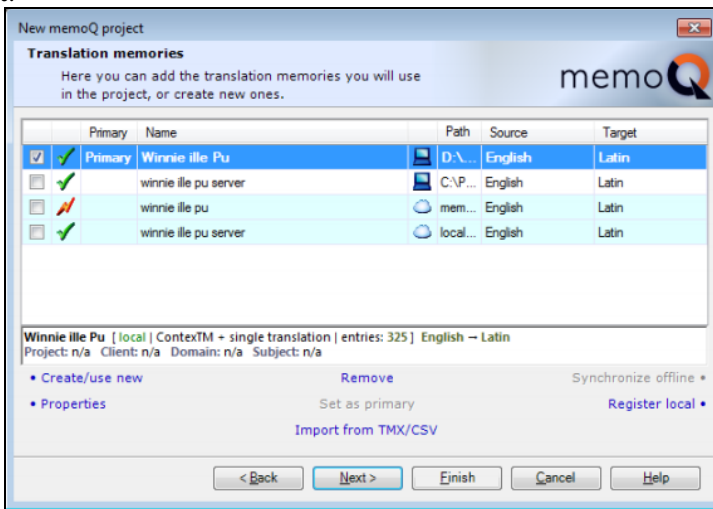
Below the table, there are three bullet points: 'Add document', 'Add document as...', and 'Remove'. There is also a link 'Import/update bilingual'. At the bottom, there are navigation buttons: '< Back', 'Next >', 'Finish', 'Cancel', and 'Help'.

You can choose command **Add document** once again to add more files into the project. Project can contain files of different types. To add documents press **Next**.

4. On the third page of wizard you can choose translation memories of the project. On this page you can see the list of all available translation memories of project language pair. For example, if you have a project of translation from English into Russian, MemoQ will not display English-Ukrainian translation memory.

To add in project one or few translation memories click the check box before the name of each one you need. The translation memories, marked by this check box, are put in the top of the list.

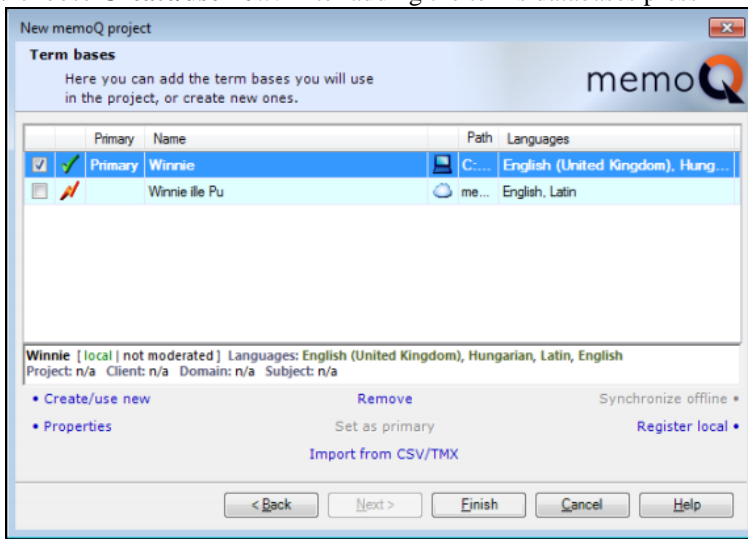
On this page of wizard you can also create a new translation memory, if you choose **Create/use new**. After you add the translation memories, press **Next**.



Translation memories, used in current project, are displayed in the top of the list. One of the translation memories is always bolded and marked as main. This is the main translation memory. If you translate and approve the segment, the final translation segment (segment pair ‘original – target’) is saved in the main translation memory. Last translation memories are used in MemoQ only for information. You can mark another translation memory as main any time after project creation.

5. On the fourth page of wizard you can choose terms databases of the project. MemoQ will display all the available terms databases, that support the languages of the current project. For example, if you have an English-Ukrainian translation project, MemoQ will not display the terms databases with English and Russian or Ukrainian and German.

To add to the project one or few terms databases, set the flag before the name of each one you need. You can also create a new terms database, if you choose **Create/use new**. After adding the terms databases press **Finish**.



MemoQ creates a project, content and settings of which are displayed on the page **Project home**.

Changing the current project

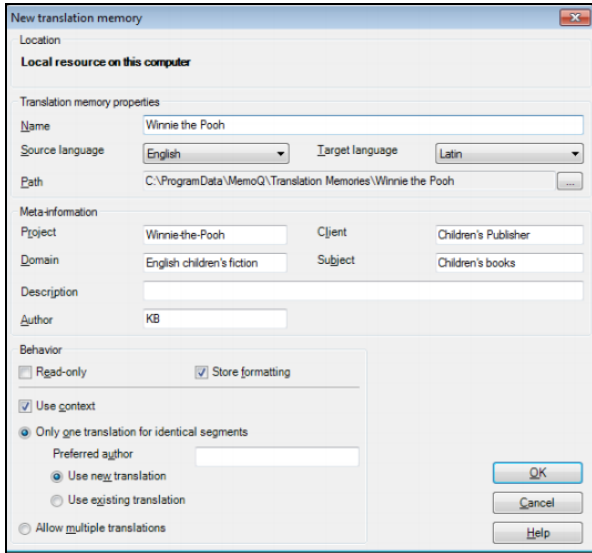
After finishing the work of **New MemoQ project wizard** or when you open an existing project, **Project home** tab opens again in MemoQ window. Here you can manage all the project parameters and change them.

Note: in New MemoQ project wizard it is possible to press Finish on the first page, when you enter only the project name and the language pair. It is possible to add documents for translation, translation memories and terms databases later through the **Project home** at the same way as in wizard.

Project home tab has 6 units. To choose the unit you should press the corresponding symbol on the left: **Overview**, **Translations**, **LiveDocs**, **Translation memories**, **Term bases** and **Settings**.

Creating the translation memory

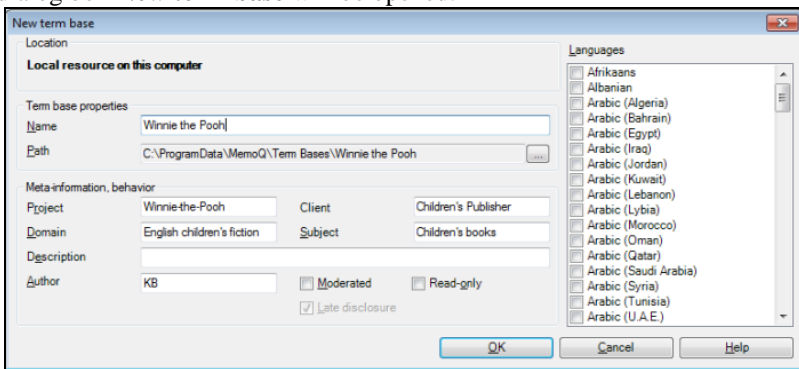
After choosing **Create/use new** on the third page of **New MemoQ project wizard** or in the unit **Translation memories** the dialog box **New translation memory** will be opened.



Here you can construct the parameters of new translation memory. If you create a translation memory in the opened project it is enough to enter its name and press OK. Translation memory languages will be taken from the project parameters. Translation memories created like that are assigned under this project automatically.

Creating terms databases

When you choose **Create/use new** on the fourth page of **NewMemoQproject wizard** or in unit **Term bases** in **Project home** the dialog box **New term base** will be opened.



Here you can construct a lot of parameters of new terms database. If you create a terms database in the opened project it is enough to enter the name and press **OK**. Terms database's languages will be taken from the project parameters. Terms database, created like that. Is automatically assigned under this project.

5. Translation and translation table

Opening the document for translation

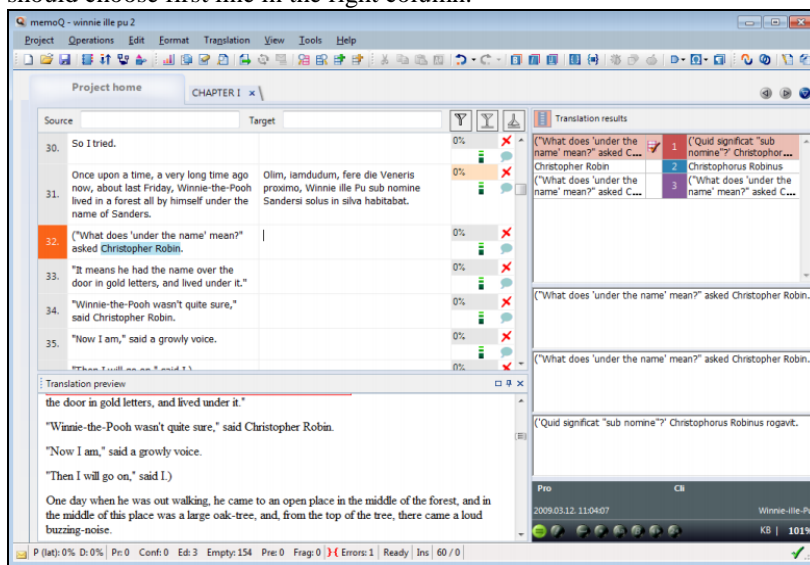
In **Project home** choose symbol **Translations**. In documents list double click on the name of document, that you are going to translate. If the document was opened already, choose its page in the top of MemoQ window.

At the same time few documents can be opened. To switch on the needed document you should press **Ctrl+Tab**.

You can close the document by pressing the button on the right from the document name or with the help of **Ctrl+F4**.

Translation Editing

On the document tab the content is displayed in the form of table with two columns. Left column contains segment on the source language. Translation is entered in the right column. To start the translation you should choose first line in the right column.



For the documents of certain formats the **translation preview** dashboard can be displayed under the translation table. There you can see, where in the document and in what form the segment appears and it will look like after the translation export.

Translation preview function is available for the following formats: HTML documents (web-pages), Microsoft Word files, RTF, Microsoft Excel, Microsoft PowerPoint and XML.


Segments confirmation


After finishing the segment translation press **Ctrl+Enter** or in menu Translation choose Confirm. MemoQ will save this segment in the document and in the main translation memory of the project and will switch to the next segment.

You can also confirm the translation of segment by pressing **Ctrl+Shift+Enter**. Or you can choose **Confirm Without Update** in menu **Translation**. In this case MemoQ will not save the translation in translation memory. This command is applied if any translation memory is not assigned under this project or if you do not want or do not need to add it to segment.

Among the others there is no need to save document in translation process, because MemoQ automatically saves all the changes on the hard drive as soon as you make them.

Merging and division of segments

If the phrase in cut in one segment and continues in the next one, it is possible to merge them by pressing  or **Ctrl+J**. MemoQ will merge the current segment with the next one.

If the current segment contains few sentences (or independent phrases), it can be divided: set the mouse bar in the required place and press  or **Ctrl+T**. MemoQ will divide it into two segments in the pointed place. Then set mouse bar on the right from the first of already processed segments and continue the translation.

Using the translation results

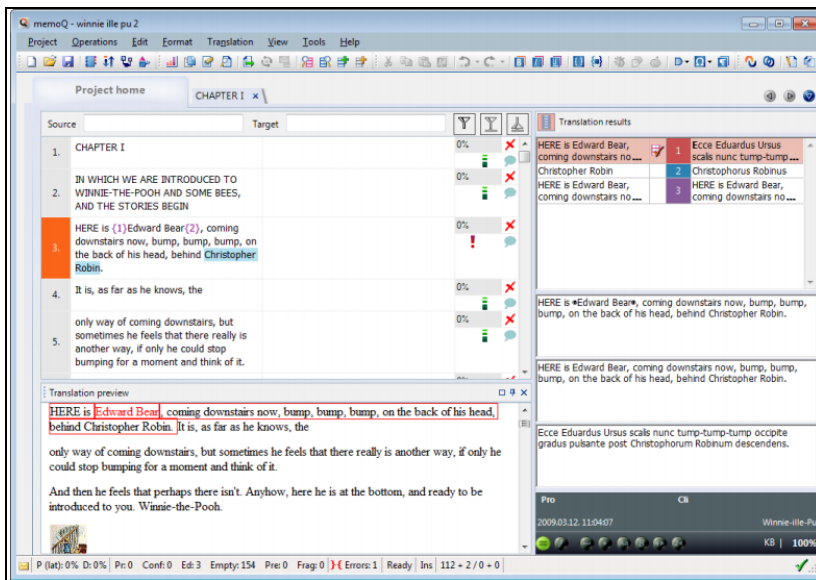
If you approve the segment, MemoQ switches to the next segment. Program will also automatically insert the best (the first) variant from the translation result list.

Note: MemoQ does not insert the best translation for the first segment in the document. Translation result also will not be inserted automatically, if you set a mouse bar there or with the help of direction buttons.

Regardless from how was the transfer to segment performed, MemoQ automatically searches the alike segment or its parts in switched translation

memories and terms databases and also tests the applying of automatic translation rules and presence of untranslated elements.

Results are displayed as list of proposed variants on the **Translation results** panel on the right from the translation table. Proposed variants are ranged: first the coincidence from translation memory are displayed, the largest of which is on the first place in the list.



If MemoQ does not insert the translation variant automatically or you want to find the best coincide for the segment, you can chose any from the list manually:

If the translation memory has an original segment that is alike to the current one or, in other words, if you translated the alike segment before, it will be displays at the top of the number list on the right and marked red. List contains the proposed variants (coincides) from translation memories and terms databases; first the coincides from translation memories are showed (marked red) and then – from terms databases (marked blue). You can move through the list by pressing **Ctrl+Up arrow** and **Ctrl+Down arrow**. The inserting of the chosen variant into translation is made by pressing **Ctrl+Space**.

NB: coincide percent displays the alikeness of the source text in segment with a source text from translation memory. 100 % coincide means that

original text and its formatting in the current segment are the same as in translation memory.

95–99 % coincide means that text coincides, but formatting and numbers differ. The lower coincide percent is the more differences there are in texts. When you choose the proposed variant from the list, MemoQ shows the differences in the fields under the list.

If after switching terms databases contain word or phrase from the current segment MemoQ will mark the coincide blue. Marked phrase and its translation are showed as a number list in the right and are marked navy.

If the segment contains few coincides they will be placed in the list in the same order as they occur in segment. You can move through the list by pressing **Ctrl+Up arrow** and **Ctrl+Down arrow**. Inserting of the chosen variant into translation is made by pressing **Ctrl+Space**.

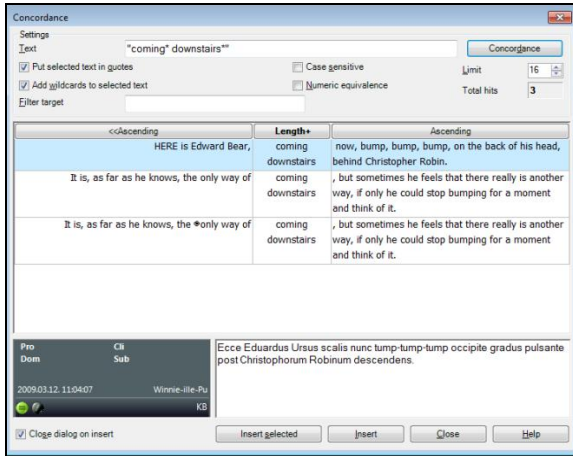
You can also insert the proposed variant with the help of entering its number: **Ctrl+variant number in the list of translation results**. Number is pointed between the original and target text on the red or blue (orange, purple or green) background.

In the comparing fields, placed under the panel of translation results original segment of the document, original coinciding segment from the translation memory and target coinciding segment are displayed. Color coding shows the differences between these segments (elements that should be added, are marked blue, those, that should be removed are marked red, and those that should be changed are marked purple).

Accuracy of coinciding (or percent of inaccurate coincide) from the translation memory is pointed by white font on the dark-grey background in right bottom of MemoQ window.

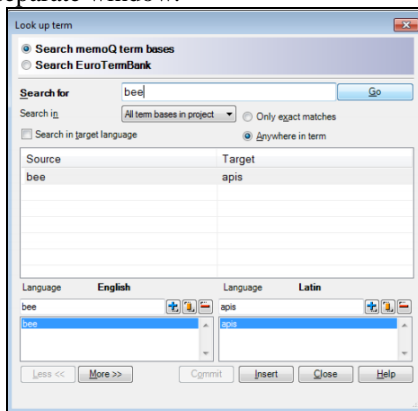
If there are no automatic variants: search in translation memories and terms databases

Sometimes the translator is not sure how to translate the word or phrase in the current segment, and there are no proposed variants in coincide list, because the sentence is not found in translation memories, and the word or phrase – in terms database. In this case it is possible to find the word or phrase in translation memories. To do it, use concordance: choose the word or phrase in the original segment and press **Ctrl+K** or in menu **Operations** choose **Concordance**. If the translation memories contain segments that have this word or phrase, MemoQ will show such segments together with their translation in the opened window.



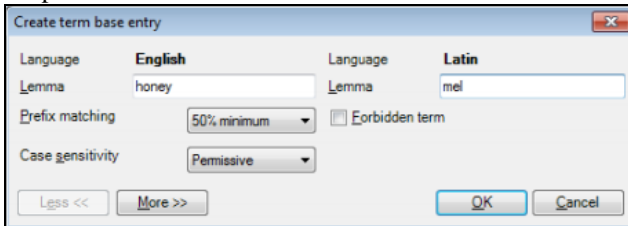
If the word or phrase occurs in translation memories more than twice, MemoQ performs concordance automatically. In such cases word or phrase will be shown as a list of coincides in the right and marked orange. When double-clicking on the ‘orange’ coincide **Concordance** window is opened. There is no need to highlight the text in the original segment. MemoQ will automatically determine the concordance criteria.

Also you can try to find the part of word or phrase in terms databases. To do that use the search in terms database: highlight the part of word or phrase in the original segment and press **Ctrl+P** or in menu **Operations** choose **Look up term**. If the terms databases contain elements which have this part of word or phrase, MemoQ will show such variants together with a translation in the separate window.

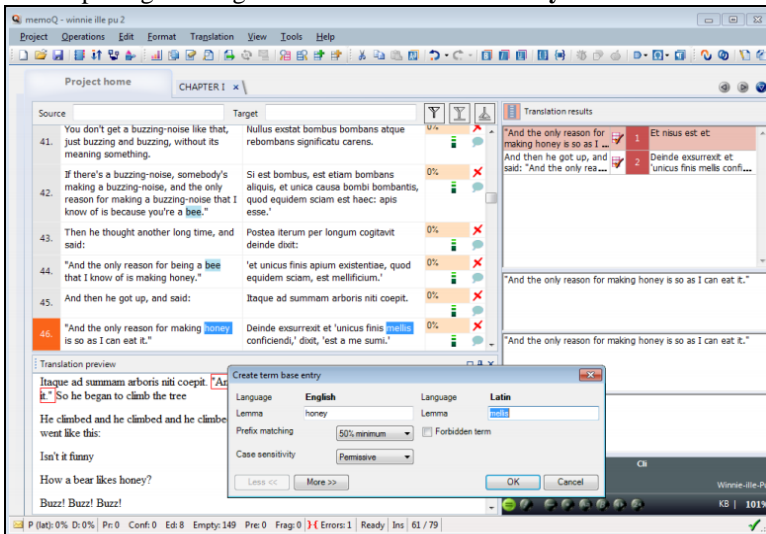


Creating of own terms database

In the process of work in translation table you can also enrich the main terms database. (You can choose the main terms database by the same way as the main translation memory – in **Term bases** unit of page **Project home**). If the phrase, that you would like to add to terms database, occurs frequently in the original text, highlight such phrase and press **Ctrl+E** or in menu **Operations** choose **Add term**. The dialog box **Create term base entry** will open.



In the text field on the right enter the translation of word or phrase and press **OK**. MemoQ will add this term and its translation to terms database at once. Further term integration will be colored. If the translation of term that you want to add, is already entered in the field, you can highlight original and target phrase and press **Ctrl+Q** or in menu **Operations** choose **Quick AddTerm**. MemoQ will automatically add the term into terms database without opening a dialog box **Create term base entry**.




Previous translation






If it is known that there are a lot of segments from original text in translation memory, you can add them all with the help of previous translation function. In menu **Translation** choose **Pre-Translate**. In the opened window you can point which coincidence types MemoQ will insert and which ones it will miss.

Important: if you have problems with document, you will need to do the following. It is almost impossible to lose the translation in MemoQ, because it is always saved in two places: in document and in translation memory. If for some reasons you can not open or send the document, you can import the original document into project one more time (open **Project home** and choose **Add document**), and then apply function **Pre-translate** to restore translation from translation memory.

Filtration and sorting

Filtration and sorting panel, which is placed over the translation table, allows to choose segments, which contain definite word in the original text and/or translation, and to choose segment of the definite type or place segments in definite order.

To reset filtration press . To reset sorting choose **No sorting** in corresponding deep-down list in the tool panel.

Сірий	0% 	Сегмент ще не редагувався.
Рожевий	0% 	Сегмент змінений, але не підтверджений.
Зелений	0% 	Переклад підтверджений. У підтверженому сегменті замість червоного хрестика коштує зелена галочка.
Блакитний	100% 	Переклад вставлений програмою під час попереднього перекладу. У такому разі на блакитному фоні буде вказано процентне значення більше нуля. Точний збіг позначається значенням 100 % (або 101 %), неточні збіги позначаються меншими значеннями.
Фіолетовий	0% 	Текст в цільовому сегменті зібраний програмою з фрагментів під час попереднього перекладу. У пам'яті перекладів не було збігу для всього сегменту, проте були його частини (фрагменти).

Using the formatting tags

When importing the original document MemoQ takes the text from the document and hides everything remained (formatting, styles, image and so


on) from translator. To see the pointed elements you need to export translation back into original format. From the original translation images – bolded, italicized and underlined are displayed in the translation table. They can be changed. If all the original segment is formatted in the same way (for example, all the segment is in italics) such image is also automatically used in target segment. If only the part of the original segment is formatted like that, the corresponding part of the target segment can be formatted by pressing **Ctrl+B**, **Ctrl+I** or **Ctrl+U**.

The rest of formatting data and image will be transformed into formatting tags during the translation and are marked with purple numbers in crochets {1} – formatting tags. For example, in the original document there is a following segment with a highlighted fragment: A segment containing highlighted text might appear like this:

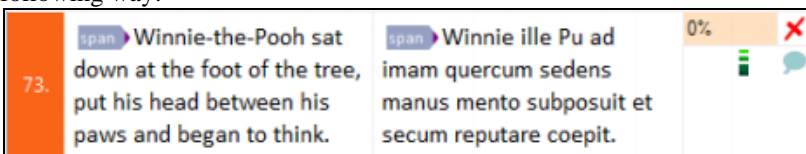
In MemoQ it looks like in following way:



Set the cursor in the place of target segment, where the tag should be placed (taking the context into consideration) and press F8. You can use the same button when entering the translation.

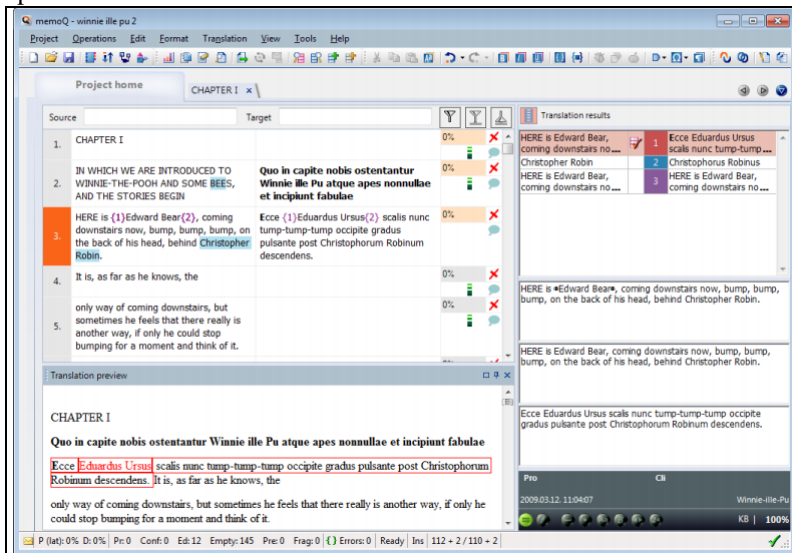
MemoQ will be able to export document back into original format only in case if you insert all the formatting tags in the corresponding places of the target segment. It is impossible to change the tag order: when you press **F8** the next in order tag is inserted. If you return to the previous segment part and add tag by pressing **F8**, MemoQ will also change the numeration of tags in the target segment. If target segment has more or less amount of tags then original one you will see a message in the informational panel (symbol ) until all the tags will be inserted or odd ones will be removed.

Tags in crochets are old tags. For most file formats, like Microsoft Office Word 2007(DOCX) or HTML MemoQ uses so-called built-in tags. You can learn the content of such tags, change their order and, if you have required knowledge and skills, create and insert new tags. They look like in following way:



Built-in tags are inserted with the help of **F9** button.

For some of the document formats in MemoQ you can preview the formatting in **Preview** panel under the translation table. Previewing of the formatted text allows to check if the tags are put correctly. You can also see what function the tags perform: another font or color, interlinear or superlinear:



MemoQ refreshes the preview during the translation process. That is why this function is also called real-time preview. Real-time preview is available for Microsoft Office files (DOC, DOCX, PPT, PPTX, XLS), HTML (web-pages) and XML.

6. Translation delivery

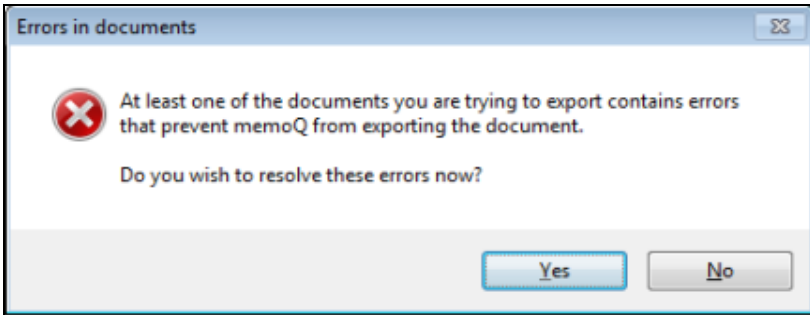
Document delivery in the original format

In the most of cases after finishing the work translator should send to customer the translated document in the original document and translation memory. The easiest way to do that is the following. See the detailed description in MemoQ Info.

1. Make sure that all the segments are translated and all the formatting tags (purple numbers in crochets: {1}) are copied into the target text. If there are untranslated tags or some of the formatting tags are missing, MemoQ will show the error report and, if formatting tags are missing, will refuse to export the document.

2. In **Project home** choose the symbol **Translations**.

3. Choose all the documents from the list and press **Export (stored path)** under the list. MemoQ will check if all the segments are translated and approved and also the correspondence of all the formatting tags in the original and target texts. After determining all the mismatches the **Errors in documents** window will open:



To check and correct all the segments where the errors occurred, choose **Yes** to switch to the page of errors correction **Resolve errors and warnings**.






Note: to export the opened document it is not necessary to switch to the **Project home** page. In **Project** menu choose **Export active document**. MemoQ will export the current document into folder by default. (You will not be proposed to choose the folder or exported file name).

4. If there are no errors, that bother to export the document, MemoQ will export each document into the folder, pointed during the import. By default in the original folder the new folder is created during the export. It is named with the help of 3 first letters of the target language (for example, **eng** for English), where the document with original name is saved.

5. The process of document export is shown with the help of operation indicator. MemoQ will show a message about the export finishing.

Document delivery in the form of two-language documents

Maybe, the customer would like to check your translation in MemoQ. To do that you will need to export two-language documents, that can be opened in MemoQ. (Such files can be added to the projects as well as other document types). These are the two-language MemoQ documents.

Сірий		Сегмент ще не редагувався.
Рожевий		Сегмент змінений, але не підтверджений.
Зелений		Переклад підтверджений. У підтверженому сегменті замість червоного хрестика коштує зелена галочка.
Блакитний		Переклад вставлений програмою під час попереднього перекладу. У такому разі на блакитному фоні буде вказано процентне значення більше нуля. Точний збіг позначається значенням 100 % (або 101 %), неточні збіги позначаються меншими значеннями.
Фіолетовий		Текст в цільовому сегменті зібраний програмою з фрагментів під час попереднього перекладу. У пам'яті перекладів не було збігу для всього сегменту, проте були його частини (фрагменти).

1. In **Project home** choose **Translations** symbol. In the document list choose the ones that should be exported as two-language MemoQ files. To choose few documents press the name of each one one-by-one, having **Ctrl** button pressed.

2. Choose **Export bilingual** under the document list. In **Bilingual export wizard** choose switcher **Memo Q bilingual document**. You will be able to choose one folder for all the chosen documents.

To open a two-language document MemoQ you will need just to add to a MemoQ project. In **Translations** panel on the page **Project manager** choose **Import MemoQ bilingual** under the document list.

Important: MemoQ can export documents as two-language Word or XLIFF (XML Localization Interchange File Format) files. With such files it is possible to work in other translation utilities (such as SDL® Trados™) and translation editors. MemoQ can also export document into RTF(RichTextFormat) file, which contains text in table, alike to translation table. With such RTF documents it is possible to work in Microsoft Word, but not in translation environment, and then with the help of edited files restart MemoQ project.

Delivery of the translation memory

Customer can also ask to send a translation memory, created during the translation. If your customer uses another translation utility, you should send translation memory in standard TMX format. To export translation memory in TMX:

1. In **Project home** choose **Translation memories** symbol. In the list choose the translation memory that should be exported.

2. Under the translation memories list choose **Export to TMX**. MemoQ will offer to choose the name and folder, where the TMX file will be created and perform the export.

This TMX file can be imported into any translation utility, which is compatible with TMX, including MemoQ.

7. Hotkeys.

Up direction button	Switching up in translation table
Down direction button	Switching down in translation table
Ctrl+Tab	Switching of tabs in opened documents
Tab	Switching the cursor from original environment into target one and back within one segment
Ctrl+ Up direction button	Switching up through the translation results
Ctrl+ Down direction button	Switching down through the translation results
Ctrl+F4	Close the page of active document
Ctrl+space	Insert the highlighted translation result into target segment
Ctrl+1 .Ctrl+9	Insert result of translation 1..9 into target segment
Ctrl+Shift+N	Move the chosen text on one word right
Ctrl+Shift+B	Move the chosen text on one word left
Ctrl+Z	Cancel: used to cancel the text which was accidentally removed or changed
Ctrl+B	Apply/cancel bolded text
Ctrl+I	Apply/cancel italic text
Ctrl+U	Apply/cancel underlined text
Shift+F3	Switching 'capital-small letters' register

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Ctrl+T	Dividing of current segment in the current cursor position
Ctrl+J	Merging of current segment with a next one
F8	Insert the next formatting tag into target fragment
Alt+F8	Insert the tags, that were not yet inserted, into target text
F9	Insert the next built-in tag (or tag sequence) into target fragment
Alt+F9	Insert all the built-in tags, that were not yet inserted, into target segment
Ctrl+Enter	Approve and add the current segment into main translation memory
Ctrl+Shift+Enter	Approve the current segment without adding the translation into main translation memory
Ctrl+Shift+L	Block or unblock of active or chosen segment
Ctrl+E	Open Add new term window, where you can add new term into main terms database – insert the fragments, highlighted in the original and target segments
Ctrl+Q	Add new term into main terms database without opening Add new term window – add the fragments, highlighted in the original and target segments
Ctrl+Shift+S	Insert all text from original fragment into target
Ctrl+Shift+T	Insert highlighted text from original text into target
Ctrl+C or Ctrl+Insert	Copy highlighted text into clipboard
Ctrl+V or Shift+Insert	Insert the text from clipboard in the cursor position or replace the highlighted fragment with the content of clipboard

Ctrl+Shift+G	Open dialog window Go to next segment, where you can point in which segment type transfer will be performed when pressing CTRL+G.
Ctrl+G	Switch to next segment of the defined type (for example, error, empty, pre-translated, repetition etc.). Types are defined in a dialog box Go to next segment)
Ctrl+K	Search the highlighted text in all the original segments of translation memory
Ctrl+P	Open the dialog window Look up term, where you can search through terms databases manually
Ctrl+F	Search the highlighted text in the translation table
Ctrl+H	Replace the highlighted text in translation table with another text
Ctrl+Num Minus	Insert en dash into target segment
Ctrl+Shift+space	Insert em dash into target text
Ctrl+Shift+-	Insert hyphen into target text

Appendix D

Presentation creation

Creation a presentation from empty document

To start working with new presentation you should:

- launch PowerPoint, for example, from **Start** menu;
- in first PowerPoint dialog window choose alternative switcher ‘Empty presentation’;
- in dialog box ‘Slide creation’ (pic. 3.7) choose the variant of automatic formatting of the first slide, i.e. the variant of slide maquette, that contains all the necessary placefillers (it is better to start from the title slide);
- enter the information to the placefillers of first slide.

After creating a presentation button ‘**Commands**’ is often used. It is placed on the standard tool panel. After pressing it you will see the menu which contains the following commands (pic. 3.8):

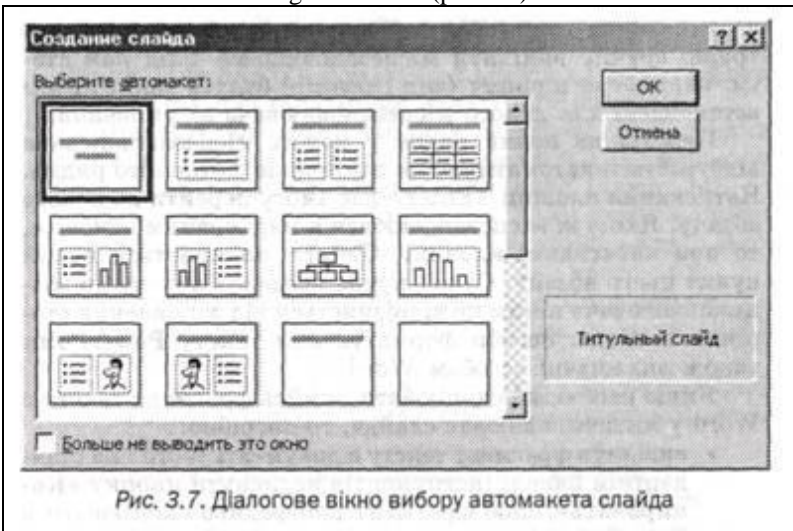


Рис. 3.7. Диалогове вікно вибору автомакета слайда
(Picture: Slide creation*Choose the automatic maquette*OK*Cancel*
Title slide*Do not show this window again
*Pic. 3.7. Dialog box of choosing the side automatic maquette)

- **Create slide** (is applied to start a work with new slide):

- **Slide formatting** (is used to change the placefillers of slide)
- **Apply design** (allows to choose the template design for presentation)

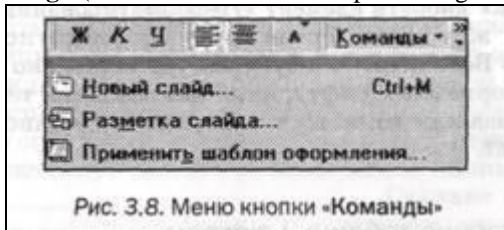


Рис. 3.8. Меню кнопки «Команды»

(Picture: B I U/Commands*New slide Ctrl+M*Slide formatting
*Apply template design*Pic. 3.8 Menu of ‘Commands’ button)

When working with a separate slide you can change not only the amount of placefillers (command ‘**Slide formatting**’ in ‘Commands’ button), but also sizes and places where they are situated. Sizes are changed by moving the slide marker. To change the place where it is situated it is enough to highlight the placefiller by mouse bar and drag to another place.

To remove the highlighted placefiller you should press ‘Delete’ button. The enter bar should be placed anywhere.

If the placefiller should contain a text, it is entered manually or using a ready text, which is a part of AWord document. Before you start entering a text you should manually highlight a placefiller. You should remember that font settings (type and size) will be the same, that are set for this placefiller at default.

Switching to the new row inside of this placefiller is made automatically after finishing a current row. Pressing the ‘Enter’ button allows to go to a new paragraph. If the placefiller is a bullet list, then a new item of this paragraph starts after pressing ‘Enter’. So the manual entering of the text into placefiller has no differences from filling in the Word page. Formatting tools in PowerPoint are also the same as in Word.

If it is necessary to copy the fragment of text from Word into the placefiller in slide you should do the following:

- highlight the text fragment in Word document and on the standard tool panel press ‘**Copy**’ to previously copy the fragment to the clipboard;
- go to the PowerPoint and highlight placefiller where you would like to copy fragment;
- in ‘**Editing**’ menu of PowerPoint choose ‘**Special pasting**’ command;
- in dialog box ‘Special pasting’ set alternative switcher ‘Paste’ and from the list ‘How’ choose the element ‘Unformatted text’.

If to use just ‘**Paste**’ command in PowerPoint, then the text with an original formatting in Word will be pasted from the clipboard. It has the same format as in PowerPoint not always.

Pasting the tables and diagrams

Giving the information in form of tables allows to make search and analyses easier. That is why **tables** are used in PowerPoint quite often. There are three types of tables in PowerPoint:

- 1) Word tables – for text and numbers (for example, price lists);
- 2) Excel tables – for final data and calculations and also in cases when diagrams are built according to data;
- 3) Access tables – when data is taken from few interdependent tables.

First two table types are copied into PowerPoint from additions, where they are created (Word or Excel) through the clipboard. To do that in PowerPoint it is enough to press ‘**Paste**’ button on PowerPoint tool panel.

Before pasting the tables from Access (forms, requests, reports) you should pay attention that system font MS Sans Serif is set in this addition at default. This font does not support Cyrillic alphabets. That is why before copying the table into PowerPoint it necessary to set up the font that supports Cyrillic alphabets in Access. To do that:

- in menu **Service** choose command **Parameters**;
- in dialog box ‘Parameters’ choose the page ‘Table mode’;
- in group ‘Font at default’ in ‘Font’ list choose the necessary font type, for example, Times New Roman Cyr.

After setting the font the process of copying the tables from Access will be the same as in from Word and Excel. Access has tools of direct data copying to Word or Excel. These tools are **Service – Connections with Office – Publication in MS Word and Service – Connections with Office – Analyses in MS Excell**. Using one of them, you can copy the data into Word or Excel, edit them there and then copy back to PowerPoint.

In the PowerPoint itself there are ways to create a table from a scratch. For example, after slide creation you can choose marking ‘Table’. In this case Word table is built. But because, from the one hand, table creation tools are worse in PowerPoint than in Word, and from the other hand, presentation, as a rule, is a summary of works made in Word or Excel, tables, made from the scratch rarely occur in PowerPoint. Mostly they are copied from the additions.

The same concerns diagrams, which are used to visualize the table data. There are 3 types of markings in PowerPoint, where there are places for fillers from diagram. But the addition Microsoft Graph is used in the each one, which is worse than Microsoft Excel instrumental graphics tools. That

is why diagrams are made in Excel as a rule, and then they are copied into PowerPoint.

Organizational diagrams

To depict hierarchic dependence between separate elements of the system (for example, structures of managing the corporation, administration power system in state, complicated tasks etc.) organizational diagram (OD) are used.

OD are built in PowerPoint with the help of **Microsoft Organization Chart addition**.

To start work with Organization Chart during the slide creation you should choose marking 'Organizational diagram' and then double click on the corresponding placefiller. Organizational placefiller is built in Microsoft Organization Chart window. After you create it the window should be closed. After the presentation is created the window should be closed. The request to refresh presentation object appears. If the answer is positive, the OD is pasted into the placefiller, where its creation starts. If the OD should be changed it is enough to double click on the placeviewer – and the diagram will be uploaded to Organization Chart.

Structure of window Organization Chart is the same to standard Windows window structure, i.e. it has title, menu row, tool panel, working area etc.

All the actions during the creating and editing the OD are performed in the working area. Mostly the commands, that are present on the tool panel, are fulfilled. Here there are 3 groups of buttons:

- -tools of general purpose (highlight, edit and preview of objects);
- border tools (creating the borders in the diagram to display each element of hierarchy – employee, colleague on the left, colleague on the right, boss, assistant);
- drawing tools (creating the lines and rectangulars).

Each hierarchy element looks like a rectangular, which is called *border* in the Organization Chart terms. All the borders have 4 text fields: 'Name', 'Position', 'Comments' and 'Comments 2'. All of them are filled with a required text information. If the fields 'Comments' and 'Comments 2' were not changed then they are not displayed in a preview mode.

To enter the required text it is enough to click on the border and then – on the required field, and then, when a bar appears, fill in all the necessary information.

To add a new border on the tool panel you should press the button with its image and click in the diagram the border, to which you would like to add it. To remove the odd border it is enough to click on it and press 'Delete' button.

Another ways of editing and formatting are similar to Word (type, size, color of font and lines etc.)

Pasting the images

Images are used in business presentations are used in 2 cases:

- to demonstrate the appearance of the product, house, map etc.;
- to add the emotional coloring to the presentation itself (to grab attention, relax etc.).

In the first case images, drafts, sketches, photos, that are prepared by specialists from the particular sphere and are kept in the media library of the corporation are used.

In the second case images that are included into the standard additions of Microsoft Clip Gallery, CoralDraw, AutoCad etc. or are saved on the different web-pages on the Internet.

To insert the image from file you should choose command '**Image – From file**' from '**Paste**' menu and with the help of dialog box '**Add image**' find the necessary file. After pasting the image it can be formatted – you can change the scale, cut, change the sharpness, brightness etc.

To add the image from Clip Gallery collection you should create a slide with a graphical placefiller and then double-click on it. The Microsoft Clip Gallery window will appear. Using it you can paste any image from the clip collection. Also it is possible here to use the new images from folders on this computer and images, that are saved on other computers on the Internet.

Pasting the images and films

Besides for Clip Gallery images it is also possible to work with such clip types as sounds and films. Each of them is placed on the separate page.

Files of two types are included into clip collection: final clip files (the clips itself) and clip catalogues (keep the information about clips characteristics. You can know the characteristics of each clip by pressing on its symbol with a right mouse button and choosing from the context menu '**Properties**'. Clip properties are determined when adding it to the collection from another sources (discs, the Internet).

Sound accompaniment refers not to a particular place, but to the whole slide. To paste the sound from Clip Gallery collection into the slide you should activate the command '**Films and sound – Sound from collection**' in the Clip Gallery window in the 'Sounds' section and choose the clip you want to paste.

If you have a wish to paste the sound from file, that is not a part of Clip Gallery (CD or hard drive on the own or any other computer of the net) you should fulfill the command '**Paste – Films and Sound – Sound from file**'.

PowerPoint allows to record a language accompaniment of the slide yourself. But in this case computer should have sound card, microphone and speakers. To record an accompaniment you should do the following:

- switch to the slide, where the sound will be recorded;
- in menu **'Paste'** choose the command **'Films and sound – Record sound'**;
- after finishing a record press **'Stop'**;
- before the field 'Name' enter the name of accompaniment and press 'OK';

On the slide the symbol appears, which is pressed to recreate a sound during the presentation.

If during the presentation oral accompaniment should be switched off, you should activate the command 'Slide show – Presentation settings' in the dialog box 'Presentation settings' switch on the indicative switcher 'Without oral accompaniment'.

Films are pasted into the slide in the following way. If the film is from the clip collection Clip Gallery, the command 'Paste – Films and sound – Films from collection' is activated, for another sources – command 'Films and sound – Films from file'. After pasting the film the size of image can be changed.

Using the hyperlinks

Described higher way of creating the slides implies the lineal demonstration, i.e. after watching the first slide you switch to the next, then to the third and so on. But the slide order during the demonstration depends on the audience (sometimes some of the questions are highlighted in details, and some of them are just mentioned, and sometimes it is required to repeat some of the slides). That is why you need to think about the tools, that allow to organize branched or cyclic presentation showing. In such cases hyperlinks are used. Those are the links to the next slide or addition, that will be displayed on the screen. On the slide hyperlink can be marked as underlined text, symbol or button (pic. 3.13). When you click on the hyperlink, you are transferred to the link which is connected with an object.

Such hyperlink usage lets the lecturer to decide himself during the presentation, depending on how the audience percepts the material, when he should switch to the next slide.

To create a hyperlink you should:

- highlight text or object, to which the hyperlink will be connected;
- in menu 'Paste' choose the command 'Hyperlink'
- in dialog box 'Add hyperlink' in the list 'Connect with' choose the object type, with which the hyperlink will be connected, in the central part of window choose this object, and, by pressing 'Tip' button, enter the text, that will appear during the slide demonstration, if to hover the mouse bar on the hyperlink.

To switch to the particular slides (previous, next, first, last etc.) you can use hyperlinks as ready buttons. To paste them into slide you should:

- in menu ‘Slide show’ choose the command ‘Managing buttons’, and in submenu choose the required action;
- on the slide draw the rectangular, which the button will use;
- in dialog box ‘Action settings’ choose the required action;
- not to forget the button purpose you can write something on them.

To do that:

- highlight the button;
- choose the command ‘Legend’ from ‘Paste’ menu;
- enter the text.

Final slide

After all the slides are created it is better to put the overview of all the presentation on last few slides. Thus you not only give the general idea of the presentation structure, but also it is possible to switch to a particular part of presentation, because unit names are given as text hyperlinks.

Creating of final slide includes the following stages:

- opening of the ready presentation, for which a final slide is created;
- switching to a sorting mode;
- highlighting the slides, names of which will be included into the final slide (having Ctrl button pressed);
- activation on the tool panel of slide sorter the button ‘**Final slide**’.

After performing of those actions before the first highlighted slide you will see the final slide which can be dragged to the required place in the sorting mode.

Animation effects

To speed up the perception of the presentation material sometimes animation is used. It creates movement effects both for the objects inside of slide and when switching from one slide to another.

Animation for object effects is set in the slide mode, and switching animations are set in the mode of slide sorter.

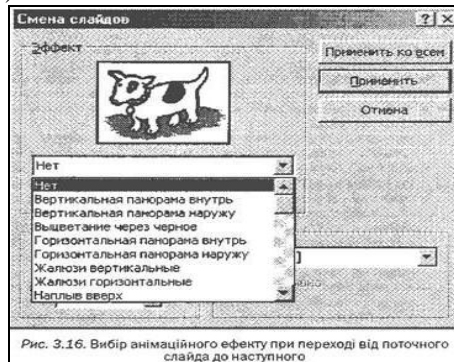
To set an animation effect for separate slide elements, you should:

- highlight the first element on the slide, to which the animation is applied;
- press ‘**Animation effects**’ button on the formatting tool panel;
- on the ‘Animation effects’ tool panel press the button, which corresponds to the required effect (turnout, fly, camera etc.)
- preview the chosen effect in the reduced variant by pressing ‘**Animation preview**’ in the bottom of ‘Animation effects’ panel. Then, if required, activate ‘**Animation settings**’ button and correct everything that you need;

- highlight the next slide element and repeat steps 2–4;
- to preview the effects in a full-screen mode go to the slide show mode by pressing the corresponding button in the left bottom of PowerPoint window.

Action order for creating the animation effects when switching from one slide to another is following:

- set the sorting slide mode by pressing the corresponding button in the left bottom of PowerPoint window;
- set the slide order by clicking the mouse first on the first, and then, having Shift button pressed – on the last of them;
- in menu ‘Slide show’ choose the command ‘Slide switching’;
- in the dialog box ‘Slide switching’ in the border ‘Effect’ choose from the drop-down list the corresponding effect and activate ‘Apply’ button (pic. 3.16).



Animation effect is a strong tool of psychological affect, that is why it is not recommended to use too many animation effects. For example, if the slides will be approximately viewed for few times, it is recommended to omit animation usage in these slides, because it will be hard to hold the audience attention in this case.

Preparing to the demonstration

After the presentation is created you should set it and make a try out. First you should determine how the switching from one slide to another will be performed and which particular slides will become a part for the presentation. If the slide switching will be performed in an automatic mode, you should set a demonstration time for each slide.

When the computer is not used you should previously save the slide content on the corresponding information storage device(paper, 35-mm slides, transparent film).

Determining the type of switching management

Depending on the place of demonstration switching from one slide to another can be performed at person's instruction or automatically.

PowerPoint has the following types of switching management:

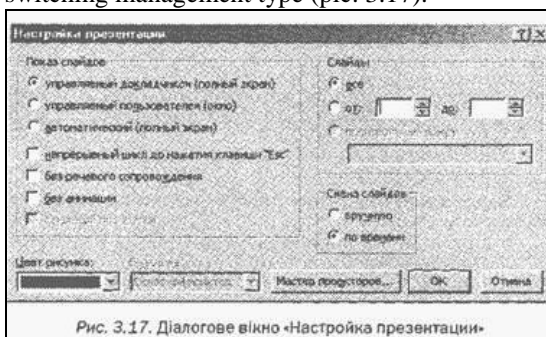
1. **Spokesman management.** Spokesman determines when the switching to the next slide should be performed. Slide show can be interrupted – to write notes, launch another addition etc. In practice this management type is used most of all. Here the slides are demonstrated in full-screen mode.

2. **Users management.** In this case slide occupies only the central part of the screen. Moreover, the menu, which contains commands of switching between slides, changing and printing of separate slides, Internet tool panel and Windows task panel is displayed on the screen, which allows to launch new apps during the presentation. In this type of management PowerPoint can occupy just a part of a desktop.

3. **Automatic switching** from one slide to another. Mostly this managing type is used on the exhibits, on the stands and another places, where the spokesman is missing. After finishing automatic presentation is demonstrated once again.

Optimal management type is set in the following way:

- in menu '**Slide show**' choose command '**Presentation settings**';
- in dialog box '**Presentation settings**' in border '**Slide show**' choose the required switching management type (pic. 3.17).



Choosing the required slides

If you do not need all the slides for a certain presentation you can choose only the ones that you need. In such cases free presentation is used. PowerPoint allows to save different combinations of slide order in one presentation, which can be used during the different demonstrations. To set the slide order you need you should:

- choose the '**Custom show**' from '**Slide show**' menu;

- in dialog box ‘**Custom show**’ press ‘**Create**’ button;
- in dialog box ‘**Assignment of ‘Custom show**’ to the text field ‘**Name of ‘Custom show**’ enter the name of required demonstration variant and then basing on the list ‘**Presentation slides**’ create a list ‘**Slides of ‘Custom show**’ (pic. 3.18). The order you need can be different from the final order.

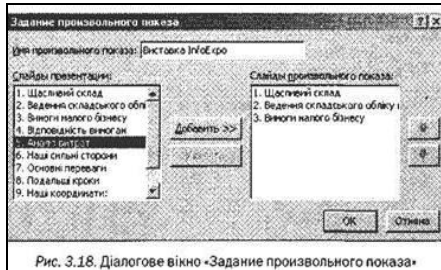


Рис. 3.18. Диалоговое окно «Задание произвольного показа»

Before starting a demonstration of the composition, created by yourself, you should:

- in menu ‘**Slide show**’ choose the command ‘**Setting of the presentation**’;
- in dialog box ‘**Setting of the presentation**’ (pic. 3.17) in the ‘**Slides**’ group enable alternative switcher ‘**Volitional demonstration**’ and in the drop-down list choose the name of demonstration variant.

Setting the time interval of slide show

To switch from one slide to another during the presentation it is enough to click the mouse button. PowerPoint also allows to switch between slides in the previously set period of time.

Way of changing the slides is chosen in dialog box ‘**Presentation setting**’ (pic. 3.17), which is called by command ‘**Slide show – Presentation settings**’. Here in the group ‘**Slide switching**’ you should choose the necessary alternative switcher – ‘**manually**’ or ‘**timed**’.

If the user prefers ‘**timed**’, he can previously set the time intervals after which the next slide will be demonstrated. Such period is set automatically or manually.

Automatic time period is set during the presentation tryout by following way:

- presentation is opened and all the necessary for demonstration slides are chosen by pointing the name of required demonstration in dialog box ‘**Presentation settings**’ (list ‘**Volitional show**’);
- then you go to the sorting mode;
- from menu ‘**Slide show**’ command ‘**Time setting**’ is chosen;

– using the tool panel ‘Repetition’ time of each slide demonstration and of the whole presentation is set;

To **set the time intervals manually** you should:

- go to the sorting mode;
- highlight the slide, for which the time interval is set;
- on the slide sorting panel press ‘Slide switching’ button;
- in the dialog box ‘Slide change’ in ‘Progress’ border point, how many seconds the slide should be demonstrated (pic. 3.20). If this time interval refers only this slide, press the ‘Apply’ button, if all the slides of the presentation – ‘Apply to all’ button. In the ‘Progress’ border it is recommended to switch on both check boxes – ‘after clicking’ and ‘automatically after’ It will allow to manage the switching to the next slide both manually and automatically.

Slide printing

To print the slides you should:

- in menu ‘File’ choose ‘Print’ command;
- in dialog box ‘Print’ point which slides should be printed (border ‘Print diapason’) and what will be printed exactly: slides, notes, structure (‘Print’ list).

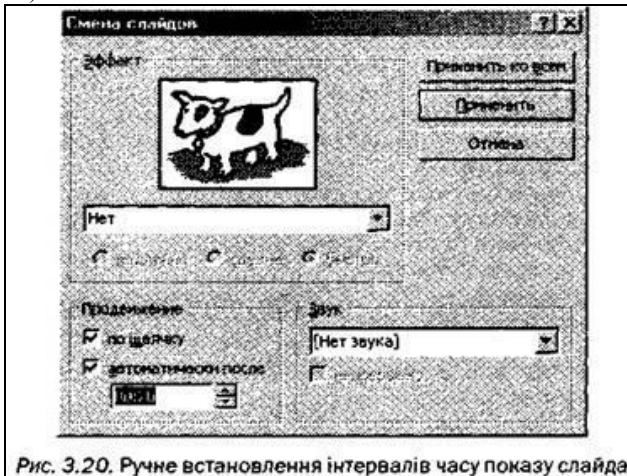


Рис. 3.20. Ручне встановлення інтервалів часу показу слайда

When the slides are about to be printed on the black-and-white printer, you should previously preview them. To preview black-and-white depiction of the slide it is enough to press the button ‘**Preview in the shades of grey**’ button on the standard tool panel. If you will also hold ‘Shift’ button the slide will have clear black-and-white depiction without shades of grey. You

can set the corresponding type of black-and-white printing in the dialog box 'Print' after choosing the necessary switcher.

Slide demonstration

Slide demonstration launch

There are few ways to **launch the slide show**:

- launch presentation from PowerPoint;
- launch presentation from desktop;
- launch the slideshow file;
- launch the volitional presentation;

If the required presentation is uploaded to PowerPoint, you can start a slideshow by one of the following ways:

- press '**Slideshow**' button in the left bottom of PowerPoint;
- choose the command '**Start show**' in '**Slideshow**' menu;
- choose the command '**Slideshow**' in '**View**' menu;
- press **F5** button.

If you launch presentation in PowerPoint, it is possible to change the slides if you interrupt the presentation or when the demonstration is over.

If no changes are required, it is easier to launch presentation from the desktop. To do that:

- create shortcut for presentation;
- click by the right mouse button on the presentation symbol and choose '**Show**' from context menu.

In this case the desktop will appear after finishing the demonstration.

It is even easier to launch the slide show, if to prepare a slide show file previously. Despite the presentation file, which has .ppt extension, slide show file has .pps extension. **To launch show** in this case you should:

- in menu 'File' choose the command '**Save as**';
- in dialog box '**Document saving**' from the list '**File type**' choose 'PowerPoint demonstration' and press '**Save**' button;
- create a shortcut on the desktop for slideshow file, that appeared in the folder.

When using slide show file presentation can be demonstrated on computers, where PowerPoint is not installed. This file type is used to show slides in automatic mode during the switching off the computer (on exhibitions stands, billboards, stands). To do that you should place the file shortcut into the folder of Windows Autolaunch in following way:

- on the task panel press '**Start**' button;
- set the mouse bar on the item '**Programs – Autolaunch**' and click by right mouse button;
- in context menu choose '**Open**' command;

- copy and drag the created before shortcut of slide show file into the opened folder ‘Autolaunch’;

- close the folder ‘Autolaunch’.

To launch the volitional presentation which contains all the presentation slides you should:

- in menu ‘**Slideshow**’ choose ‘**Volitional show**’ button;

- in dialog window ‘Volitional show’ choose the name of required demonstration and press ‘**Show**’ button.

Slide show management

During the demonstration in non-automatic mode to switch to the next slide it is enough to click on the previous slide.

If there are management buttons or hyperlinks in the slide, clicking by mouse on them allows to go to the set slide or addition.

If required, arranged order of the slideshow can be changed by right mouse button click on the slide, and then you should choose the next slide from the context menu. Command ‘**Transfer**’ is used to choose the slide not only at the name, but also to choose another volitional presentation, which name was created with command ‘**Slideshow – Volitional show**’. Context menu allows to make notes to the slide and show notebook.

When the material is explained sometimes it is necessary to draw or underline something on the slide. It can be done with the help of feather in which the mouse bar sometimes transforms. To do that ‘**Feather**’ command is chosen from the context menu. The same menu is used to set the color of feather. Attention: all the pictures, made with the help of feather, are kept on the screen only during the demonstration. They disappear even during the repetition.

SHORT DICTIONARY OF THE COURSE

Ukrainian	Russian	English
Автоматизований переклад	Автоматизированный перевод	Computer-Aided Translation
Анафора	анафора	anaphora
Апаратне забезпечення	аппаратное обеспечение	hardware
Бі-текст	би-текст	parallel corpora
Варіантні відповідності	вариантные соответствия	variant adequacy
Вербалізація	вербализация	verbalisation
Глосарій	глоссарий	glossary
Інтерактивні текстові редактори	интерактивные текстовые редакторы	interactive text editor
Інтерпретація	интерпретация	interpretation
Інформаційна технологія	информационная технология	information technology
Інформація	информация	information
Гіпертекст	гипертекст	hypertext
ІВМ РС-сумісний комп'ютер	IBM PC-совместимый компьютер	IBM PC-compatible computer
Компіляція	компиляция	compilation
Декодування	декодирование	decoding
Конверсія	конверсия	conversion
Конкорданс	конкорданс	concordance
Конективізм/ конекціонізм	коннективизм/ коннекционизм	connectionism
Лексема	лексема	lexeme
Математичне забезпечення	математическое обеспечение	software
Машинний переклад	машинный перевод	machine translation
Морфологія	морфология	morphology
Дискова ОС від Microsoft	дисковая ОС от Microsoft	MS-DOS (Microsoft Disc Operating System)
Омограф	омограф	homograph
Інтерпретація	интерпретация	interpretation
Омонім	омоним	homonym
Оперативна пам'ять	оперативная память	RAM (Rapid Access Memory)

Information Technologies in Translation

Ukrainian	Russian	English
ОС (Операційна Система)	ОС (Операционная Система)	OS (Operating System)
Пам'ять перекладів	ПП (Память Переводов)	TM (Translation Memory)
Повідомлення	сообщение	message
Прикладна програма	прикладная программа	application software
Тема	тема	theme
Текст	текст	text
Членування висловлювання	членение сообщения	articulation of an utterance
Програмна оболонка	программная оболочка	program shell
Програмне забезпечення	программное обеспечение	software
Резидентна частина програми	Резидентная часть программы	resident part of the program
Семантика	семантика	semantics
Синтаксис	синтаксис	syntax
Словоформа	словоформа	word-form
Текстовий редактор	текстовый редактор	text editor
Трансформаційний переклад	трансформационный перевод	transformational translation
Утиліта	утилита	utility/ tool
Формальна граматики	формальная грамматика	formal grammar
Розширювана мова розмітки	расширенная форма разметки	XML (Extensible Markup Language)

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