

ВЫСШАЯ ШКОЛА ЭКОНОМИКИ  
НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ

**Английский для профессионалов**

# Учебно- методическое пособие к учебнику

«Professional English in Use.  
ICT. For Computers and the Internet»

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Под редакцией  
Т.А. Барановской,  
Т.П. Кашкаровой



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У91 **Учебно-методическое пособие** к учебнику «Professional English in Use. ICT. For Computers and the Internet» [Текст] / под ред. Т. А. Барановской, Т. П. Кашкаровой; Нац. исслед. ун-т «Высшая школа экономики». — М.: Изд. дом Высшей школы экономики, 2013. — 224 с. — (Английский для профессионалов). — 600 экз. — ISBN 978-5-7598-0996-8 (в обл.).

Учебно-методическое пособие разработано преподавателями кафедры английского языка факультета экономики, которые ведут занятия на факультете бизнес-информатики и отделения программной инженерии НИУ ВШЭ. В ходе занятий со студентами по учебнику «Professional English in Use. ICT. For Computers and the Internet» Издательства Кембриджского университета (Cambridge University Press) со студентами НИУ ВШЭ возникла необходимость дополнить существующий курс глоссарием с русскоязычными соответствиями, заданиями на перевод и дополнительными заданиями, которые помогут совершенствовать навыки говорения. Цель создания пособия — помочь студентам и всем заинтересованным лицам расширить словарный запас и более комфортно ощущать себя в иноязычной профессиональной среде.

Рекомендуется как дополнительный компонент к учебному курсу «Professional English in Use. ICT. For Computers and the Internet» для российских студентов неязыковых вузов, имеющих уровень языковой подготовки не ниже «pre-intermediate» и обучающихся по специальности «бизнес-информатика» и «программная инженерия».

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# UNIT 1



## 1. Vocabulary

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assistive technology	вспомогательная технология
computer addiction	компьютерная зависимость
cybercrime	киберпреступность, киберкриминал, преступления в Интернете, сетевая преступность
design an on-line newspaper	делать дизайн электронной газеты
download files	загружать файлы
DVD (digital video disc) recorder	дисковое записывающее устройство
electronic waste	электронные отходы
GPS (Global Positioning System)	глобальная система навигации и определения положения
HMD (head-mounted display)	нашлемный дисплей
interactive whiteboard	интерактивная доска
loss of privacy	потеря права на частную жизнь
make calculations	делать вычисления
publish e-books	публиковать электронные книги

retouch photos	ретушировать фотографии
screen reader	экранный диктор, программное обеспечение, предназначенное для интерпретации происходящего на экране в голосовые сообщения, либо в шрифт Брайля
send e-mails	отправлять электронную почту
store information	хранить информацию
surf the Web	бродить по Интернету
technological dependence	компьютерная зависимость
virtual reality	виртуальная реальность
wireless network	беспроводная сеть
write letters and faxes	писать письма и факсы



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## 2. Translate from Russian into English

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- 2.1. Электронная почта представляет собой эффективный способ быстрого обмена текстовыми сообщениями и хранения их в электронном формате.
- 2.2. Компьютерные преступления включают широкий спектр незаконных действий, которые могут привести к потере права пользователя на личную жизнь.
- 2.3. Стремительное развитие технологии является причиной быстрого устаревания электронных устройств, избавление от которых вызывает проблему утилизации электронных отходов.
- 2.4. Беспроводные сети предоставляют возможности поиска в сети Интернет, а также скачивания и просмотра музыки и видео в цифровом формате в любой точке планеты.

- 2.5. Несмотря на свои преимущества, широкое использование компьютерных устройств во всех сферах жизни может вызвать компьютерную зависимость.
- 2.6. Многие печатные средства массовой информации предпочитают иметь электронные версии своих изданий, публикуемые в сети Интернет.
- 2.7. Для обработки фотографий на компьютере потребуется установка необходимого программного обеспечения.
- 2.8. Возможности технологии виртуальной реальности позволяют совершать действия, невозможные в реальном мире.
- 2.9. Составление графиков и таблиц является неотъемлемой частью работы служащих в сфере экономики.
- 2.10. Вспомогательные технологии значительно облегчают использование компьютера инвалидами.



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## 3. Reading

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### 3.1. Read the text

#### The Paperless Office: on Its Way, at Last

Stephanie Breedlove and her husband founded Breedlove & Associates 16 years ago to help families who hire a nanny with the crushing burden of paperwork that this entails. There are pay stubs to be sent, federal and state tax returns<sup>1</sup> to be filed, pay schedules<sup>2</sup> to be updated and other trails of exceedingly boring paper. Much of the firm's small office in Austin, Texas, is taken up by 100 paper-filled filing cabinets. An office manager spends 25 hours a week shuffling paper between desks and drawers. At peak times the office becomes "a sea of paper", with colour-coded stacks<sup>3</sup> on conference tables, floors and chairs.

With luck, this will soon be a thing of the past. Last year Breedlove decided to go paperless. It is now about halfway there, says Ms Breedlove. The constant flow

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<sup>1</sup> Tax return — налоговая декларация.

<sup>2</sup> Pay schedule — график выплат.

<sup>3</sup> Stack — кипа, стопка.

of information between Breedlove and its clients now goes via e-mail, with forms attached as PDF files. The next step is to roll out an online service so that clients can log on to manage their accounts. Only the Internal Revenue Service<sup>4</sup> still insists on paper for some things but even it claims to be going electronic soon.

Fewer trees will die and less ink will be squirted, but that is not her primary motivation, she says. It is that everyone — clients and staff — is sick of paper. The clients tend to be young, middle-class families with toddlers; they are good with technology and already pay bills online, use e-tickets on planes, e-file their tax returns and Google recipes rather than using cookbooks. And Breedlove's 16 employees are in their 20s, native to Facebook and instant-messaging and baffled by the need for paper. Now everybody is happier. Next year the firm expects to be completely paperless.

A decade ago this scenario was brought up only in sardonic jokes. Instead of the paperless office promised by futurists, offices and homes seemed to be drowning in more paper than ever. In the digital era people were exchanging much more information, but neither technology nor behaviour had caught up. They were printing e-mails for archiving and Word documents for marking up by hand.

But as it turned out, that was the very year when demand for office paper began declining. Office workers in rich countries will reduce their consumption of paper year for the foreseeable future.

Older people still prefer a hard copy of most things, but younger workers are increasingly comfortable reading on screens and storing and retrieving information on computers or online.

As new generations of office workers leave university — where their class notes and syllabuses are online these days — they take their habits with them. They like digital information because it reduces clutter<sup>5</sup>. It can be “tagged” and thus filed into many folders instead of just one physical file. It can be searched by keyword. It can be cut, pasted and remixed. It allows for easier collaboration, through features such as “track changes”. It can be shared across an ocean as easily as across a desk. Increasingly, it resides in the Internet “cloud” and can be accessed from anywhere, not just in the office. By contrast, paper tends to get torn, stained, burnt, soaked and lost.

Information thus appears to be becoming paperless roughly as transport has become horseless. When cars came along, the number of horses in America

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<sup>4</sup> Internal Revenue Service — Налоговое управление США.

<sup>5</sup> Clutter — беспорядок.

dropped at first, but the number is now roughly back to where it was in the late 19th century. As a share of the trips people take, horses have become insignificant. But they are thriving for special occasions and sport. Paper, too, has a future — for the fine copy of the “Iliad”, the women’s fashion magazine and the memorable certificate. But nobody, least of all the staff at Breedlove, will shed a tear for those stacks of tax forms on the carpet.

*Adapted from the “Economist”, 9th October 2008*

## 3.2. Comprehension tasks

### 3.2.1. Answer the questions to the text

1. What is the reason for an office to go paperless?
2. How is information exchange done in paperless office?
3. How can paperless office affect the environment?

### 3.2.2. Match the following statements as True or False

1. The reason to relieve the burden of paperwork and turn it electronic was to reduce clutter it creates and speed up the flow of information.
2. The clients and staff are unwilling to catch up the opportunities paperless office provides.
3. Digitizing information will inevitably entail the extinction of printed materials.



## 4. Discussion

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- 4.1. Digital era made paperless office a reality but we shouldn’t be totally dependent on computers to get work done because some information still requires physical presence at our sight.
- 4.2. Mass digitization will mean the end of some jobs, for example a postman, and many companies that supply office goods.
- 4.3. Some pieces of recorded information, like tax returns, are created to serve a temporary purpose and allowed to vanish but long-term value items of cultural heritage must be preserved in original.

# UNIT 2



## 1. Vocabulary

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CPU (central processing unit)	центральный процессор (ЦПУ)
hard disk drive	привод жесткого диска
hardware	аппаратное обеспечение
input devices	устройства ввода данных
keyboard	клавиатура
main memory	основная память, оперативная память
mouse	компьютерная мышь
output devices	устройства выхода данных
peripherals	периферийные устройства
RAM (random access memory)	оперативное запоминающее устройство (ОЗУ), память со случайным доступом
rom (read-only memory)	постоянное запоминающее устройство (ПЗУ)
software	программное обеспечение
storage device	запоминающее устройство
USB (universal serial bus)	интерфейс передачи данных для периферийных устройств)



USB port

USB-порт, интерфейс, обеспечивающий подключение к компьютеру цифровых и мобильных устройств



## 2. Translate from Russian into English

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- 2.1. Основными задачами компьютера являются ввод и вывод информации, а также обработка и хранение данных.
- 2.2. Главные составляющие компьютера включают аппаратное и программное обеспечение.
- 2.3. Программное обеспечение представляет собой совокупность инструкций, данных, программ, которые обрабатываются компьютером.
- 2.4. Помимо механических и электронных частей в состав аппаратного обеспечения компьютера входят периферийные устройства.
- 2.5. В ПЗУ хранится критически важная для компьютера информация, которая не зависит от выбора операционной системы.
- 2.6. Для ввода и вывода данных к компьютеру подключаются внешние устройства, которые позволяют вводить информацию, подлежащую обработке (клавиатура, мышь), и выводить результаты этой обработки (монитор, принтер).
- 2.7. Среди устройств для хранения информации жесткий диск является ключевым компонентом системы ПК, так как он предназначен для долговременного хранения большинства программ и документов.
- 2.8. Преимущества DVD по сравнению с CD — предоставление более широких возможностей для управления записанной информацией, а также больший объем ее хранения.
- 2.9. Процессор получает данные для обработки из оперативной памяти — устройства, предназначенного для временного хранения как входных, так и выходных данных.

- 2.10. Порты ввода-вывода являются универсальными, позволяющими подключать неограниченное количество разнообразных внешних устройств, включая внешние накопители на жестких дисках, CD- и DVD-приводы, проигрыватели, флеш-карты.



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## 3. Reading

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### 3.1. Read the text

#### Back in Fashion

Geeks may roll their eyes at the news that Namibia is only now getting its first mainframe — a technology that most consider obsolete. Yet the First National Bank of Namibia, which bought the computer, is at the leading edge of a trend. Comeback is too strong a word, but mainframes no longer look that outdated.

Until the 1980s mainframes, so called because the processing unit was originally housed in a huge metal frame, ruled supreme<sup>1</sup> in corporate data centers. Since then, these big, tightly laced bundles of software and hardware have been dethroned by “distributed systems”<sup>2</sup>, meaning networks of smaller and cheaper machines, usually not based on proprietary technology<sup>3</sup>. But many large companies still run crucial applications on the “big iron”<sup>4</sup>: there are still about 10,000 in use worldwide. Withdraw money or buy insurance, and in most cases mainframes are handling the transaction.

Some companies like mainframes because they are reliable, secure and easy to maintain. But others have no choice. Banks, for instance, use decades-old applications to manage customer accounts. Moving these programs to other computers would be expensive and sometimes impossible. Most firms that can move off the mainframe have already done so.

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<sup>1</sup> To rule supreme — играть важную роль, занимать главное место.

<sup>2</sup> Distributed system — распределительная система.

<sup>3</sup> Proprietary technology — несвободная технология, являющаяся собственностью автора.

<sup>4</sup> Big iron — «большая железяка» (прозвище сверхмощного большого компьютера).

High “switching costs” explain in large part why mainframes are still a good business for IBM. It is the only big firm left selling them, at prices that start at \$100,000 but often reach the millions. Sales of mainframes are said to have brought in about \$3.5 billion a year, on average, in the past decade. Although this is only about 3.5% of the firm’s overall revenue, each dollar spent on hardware pulls in at least as much from sales of software and maintenance contracts.

To preserve its mainframe business, IBM has regularly modernised its line-up<sup>5</sup> of machines, lowering prices and improving performance. It has also given cash and computers to hundreds of universities and schools to get them to train replacements for retiring mainframe administrators.

In addition, IBM is trying to get customers to use mainframes for more functions. For some years it has offered specialised add-on processors at considerably lower prices, to run a greater variety of programs, mostly based on Linux, an open-source operating system. And last year IBM started bundling<sup>6</sup> mainframes with applications at a discount.

IBM is also trying to attract new customers, particularly in fast-growing emerging markets. Without mainframes, India’s Housing Development Finance Corporation and the Bank of China in Hong Kong would have a hard time dealing with their explosive growth.

All these efforts have had a degree of success, although mainframe revenues have been badly hurt by the recession. About 1,300 firms, a third of IBM’s mainframe customers, have bought add-ons enabling them to use Linux. But IBM is in legal trouble again, as it was in the 1970s. It is accused of abusing its mainframe monopoly by refusing to license software that allows other firms to build cheaper clones of its machines. Regulators in Washington and Brussels are looking into the case.

More worrying to IBM is a run-in with Neon, a software company. It sells a program that allows computing tasks that usually run on a mainframe’s regular processors to be shifted to the discounted ones meant to run things like Linux. Predictably, IBM is not happy and is said to have threatened to charge higher licensing fees to customers using Neon’s software. This, in turn, has led Neon to file a lawsuit against IBM. Defeat would make a big dent in IBM’s mainframe revenues.

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<sup>5</sup> A line-up — ассортимент.

<sup>6</sup> To bundle — поставлять в комплекте.

Still, the computer industry seems to be moving IBM's way. The mainframe may well find a new home in corporate computing clouds, the pools of data-processing capacity many firms are building. Many companies are also increasingly interested in buying simpler, more integrated computer systems, even if this means a higher price. Reacting to this, IBM's rivals are making bets on mainframe-like products. On January 13th HP and Microsoft announced a pact to come up with tight packages of hardware and software. Brad Day of Forrester Research, another market-research group, puts it thus: "We are on the way back to the future".

*Adapted from the "Economist", 16th November 2010*

## 3.2. Comprehension tasks

### 3.2.1. Answer the questions to the text

1. What is a mainframe and where it can be found nowadays?
2. What makes mainframe producing a good business for IBM?
3. What is the future of mainframe-making?

### 3.2.2. Match the following statements as True or False

1. Mainframe computers are thought to be outdated and obsolete because of the recent fast developments in distributed systems, meaning networks of small and cheaper machines.
2. Large companies still use mainframes for their crucial applications because they are reliable, secure and easy to maintain.
3. Software companies file complaints accusing IBM of having abused its position in the mainframe market.



## 4. Discussion

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- 4.1. Comment on the following opinion: "We are on the way back to the future".
- 4.2. Mainframe consumers are denied the ability to choose among the most appropriate hardware and software beyond IBM.
- 4.3. The revival of mainframes will affect the development of cutting-edge technologies, e.g. cloud computing.

# UNIT 3



## 1. Vocabulary

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mainframe	высокопроизводительный компьютер со значительным объемом оперативной и внешней памяти, предназначенный для выполнения интенсивных вычислительных работ
desktop pc	настольный компьютер
laptop	портативный компьютер
TFT (thin film transistor — тонкопленочный транзистор) screen	экран тонкопленочной технологии
touchpad	сенсорная панель
battery pack	батарея
tablet pc	планшетный компьютер
handheld device	портативное устройство
PDA (personal digital assistant)	персональный цифровой секретарь, карманный компьютер
stylus	стилус, компьютерное перо
touch screen	сенсорный экран

handwriting recognition	распознавание почерка
voice recognition	распознавание голоса
wearable computer	носимый компьютер



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## 2. Translate from Russian into English

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- 2.1. Ноутбук — это переносной персональный компьютер, который весит несколько килограммов. Время работы ноутбуков от аккумулятора находится в пределах от одного до четырех часов. Портативные компьютеры выполняют те же задачи, что и настольные компьютеры, хотя производительность ноутбука существенно ниже. Портативные компьютеры имеют жидкокристаллический дисплей. В дополнение ко встроенной клавиатуре они могут содержать сенсорную панель или иное устройство для ввода, хотя к нему может подключаться внешний компьютерный манипулятор типа мыши или клавиатуры.
- 2.2. Планшетный компьютер — класс ноутбуков, оборудованных сенсорным экраном, которые позволяют работать при помощи стилуса или пальцев, как с использованием, так и без использования клавиатуры и мыши. Планшетный ПК удобен для чтения электронных книг и редактирования документов.
- 2.3. Карманный персональный компьютер — портативное вычислительное устройство, обладающее широкими функциональными возможностями. Изначально КПК предназначались для использования в качестве электронных органайзеров. В настоящее время КПК используются для доступа к офисным приложениям, чтения книг, проигрывания аудио и видео, выхода в Интернет.
- 2.4. Надеваемый компьютер можно носить на теле. Предоставляет возможность работать, общаться, развлекаться при помощи компьютера постоянно и иметь при этом полную свободу передвижения.

- 2.5. Мейнфрейм — высокопроизводительный компьютер со значительным объемом оперативной и внешней памяти, предназначенный для организации централизованных хранилищ данных большой емкости и выполнения интенсивных вычислительных работ.
- 2.6. Настольный компьютер — стационарный персональный компьютер, предназначенный для работы в офисе или в домашних условиях. Термин обычно используется для того, чтобы обозначить вид компьютера и отличить его от компьютеров других типов, например, портативного компьютера, карманного компьютера, встроенного компьютера или сервера.



## 3. Reading

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### 3.1. Read the text

#### The Liquefaction of Hardware

Imagine a personal computer that has two souls. One moment it is your work machine, complete with a set of corporate applications and tight security settings. Then it becomes an entertainment centre, allowing you to watch any video and download any program.

Thanks to a process called “virtualisation”, such computers are now being created. Ever more processing power and clever software are allowing devices of all kinds to separate from their hardware vessels and move to new homes. If this process continues as some expect, it will change computing radically. And more than one IT company will have to rethink how it does business.

Virtualisation dates back to the age of mainframe computers. To make better use of them they were sometimes split into smaller “virtual machines”, each of which could run its own operating system and application.

The success of server virtualisation has inspired IT firms and their customers to do the same thing with other types of hardware, such as devices to store data. Software now pools their capacity and allocates “virtual disks” as needed. Even

large files can take only seconds to upload if they already exist somewhere on one of these firms' disks.

The virtualisation of PCs is now under way. Many company computers can already work with applications that run on a central server. But start-ups are pushing the concept further. DeskDone offers virtual desktops as an online service. NComputing, a maker of computer terminals, virtualises PCs so they can be shared by up to 30 users. It has already sold more than 2.5m devices, mostly to developing countries and schools. And technology from MokaFive can send an entire virtual machine — complete with operating systems, applications and data — over the network and install it on any PC. Eventually people may no longer need to carry laptops at all. Virtual computers, including data and applications, will follow them everywhere.

In the long run, smartphones and other mobile devices may also become shells to be filled as needed. Open Kernel Labs already lets smartphones run applications, multimedia and radio functions on a single processor, cutting manufacturing costs. Software from Citrix turns the iPad, Apple's tablet computer, into a terminal for applications that run in a corporate data centre.

There is certainly no lack of demand in virtualization. Virtualisation lowers costs by enabling firms to make better use of their servers and buy fewer new ones. The technology also allows PCs to be maintained remotely, which is much cheaper. But improved reliability and security are even more of an attraction. Users, for instance, can relaunch their virtual machine should a computer virus infect it. And it can be shut down if a laptop is lost or stolen.

Yet the technology also has to overcome a few hurdles. The virtualisation of servers is well understood, but for PCs and mobile devices the technique has yet to mature. In the longer run institutional barriers will prove more of a problem. Virtualising IT systems is only the first step to automating the management. This is seen as a threat to existing workers and makes many IT departments hesitant to embrace the technology.

Still, analysts believe virtualisation will win out. Its impact will be felt through the industry. The technology not only makes IT systems more flexible, but allows firms to switch vendors more easily — which will weigh on the vendors' profits.



Moreover, virtualisation makes it much easier to add new servers or storage devices. Alternatively, firms can simply rent extra capacity from operators of what are called “computing clouds”, such as Amazon Web Services. That outfit has built a network of data centres in which virtual machines and disks can be launched in seconds. As a result, IT systems will increasingly no longer be a capital expense, but an operational cost, like electricity.

Yet the most noticeable change for computer users will be that more employees will be allowed to bring their own PC or smartphone to work. Companies can install a secure virtual heart on private machines, doing away with the need for a separate corporate device. A “bring your own computer” or “BYOC” movement has already emerged in America. Companies pay their employees a stipend, which they can use to buy any PC they want — even an Apple Mac.

Such innovations may help to ease growing tensions between workers and IT departments. New privacy regulations and rampant cybercrime are pushing firms to tighten control of company PCs and smartphones. At the same time more and more “digital natives” enter the workforce. They have grown up with the free-wheeling Internet and do not suffer boring black corporate laptops gladly. Giving workers more freedom while helping firms keep control may prove to be the biggest benefit of virtualisation.

*Adapted from the “Economist”, 18th November 2010*

## **3.2. Comprehension tasks**

### ***3.2.1. Answer the questions to the text***

1. What is the origin of virtualization?
2. What are the recent developments of start-up companies?
3. What are the benefits of virtualization?
4. What are the hurdles that virtualization has to overcome?

### ***3.2.2. Match the following statements as True or False***

1. Virtualization dates back to the age of transistors.
2. Virtualization allows PCs to be maintained remotely, which is much cheaper.
3. The complete automation of the IT management is a threat to existing workers.



## **4. Discussion**

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- 4.1. Security and reliability are the greatest concerns that slow down virtualization.
- 4.2. Virtualization not only makes IT systems more flexible, but allows firms to rethink how they do business.
- 4.3. One of the primary goals of virtualization is making the most efficient use of available system resources which contributes to green computing.