

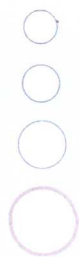


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规划教材

面向21世纪高等院校计算机系列规划教材
COMPUTER COURSES FOR UNDERGRADUATE EDUCATION

计算机专业英语

张强华 司爱侠 主编



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北京

内 容 简 介

本书以单元为单位,每个单元由以下几部分组成:Text——课文中包括基础知识和基本概念;New Words——给出课文中出现的新词,读者由此可以积累计算机专业的基本词汇;Phrases——给出课文中的常用词组;Abbreviations——给出课文中出现的、业内人士必须掌握的缩略语;Notes——讲解课文中出现的疑难句子,培养读者的阅读理解能力;Reading Material——提供最新的设备和软件的相关资料,可进一步扩大读者的视野;Reading and Translation Skills——可以帮助读者掌握专业英语常用的阅读和翻译技巧;Glossary Expanding——通过构词法扩大词汇量;习题——检验学习效果。附录1提供习题参考答案,可供读者检查对比;附录2提供参考试卷,可供读者自测。

本书既可作为高等院校信息类(包括计算机科学与工程、计算机应用与维护、计算机网络、软件工程、信息管理等专业)的专业英语教材,也可供参加计算机行业各种考试的读者备考之用。

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前 言

英语对计算机相关的从业人员特别重要。英语水平已经成为决定工作能力的因素之一。因此，各个学校都开设计算机专业英语课程，进行专门学习。本书的目的就在于切实提高读者实际使用计算机英语的能力。

本书以章为单位，每章由以下几部分组成：**Text**——课文中包括基础知识和基本概念；**New Words**——给出课文中出现的新词，读者由此可以积累计算机专业的基本词汇；**Phrases**——给出课文中的常用词组；**Abbreviations**——给出课文中出现的、业内人士必须掌握的缩略语；**Notes**——讲解课文中出现的疑难句子，培养读者的阅读理解能力；**Reading Material**——提供最新的设备和软件的相关资料，可进一步扩大读者的视野；**Reading and Translation Skills**——可以帮助读者掌握专业英语的常用阅读和翻译技巧；**Glossary Expanding**——通过构词法扩大词汇量；**习题**——检验学习效果；附录 1 提供习题参考答案，可供读者检查对比；附录 2 提供参考试卷，可供读者自测。

笔者已出版了六部计算机英语教材（其中两部获奖），有十余年的教学经验。在本书编写中，我们着重从知识体系、常用设备及计算机最新发展热点三方面来组织内容。

为了方便教师教学，本书配有电子教案，可以到科学出版社网站上的下载区下载（<http://www.sciencep.com>）。

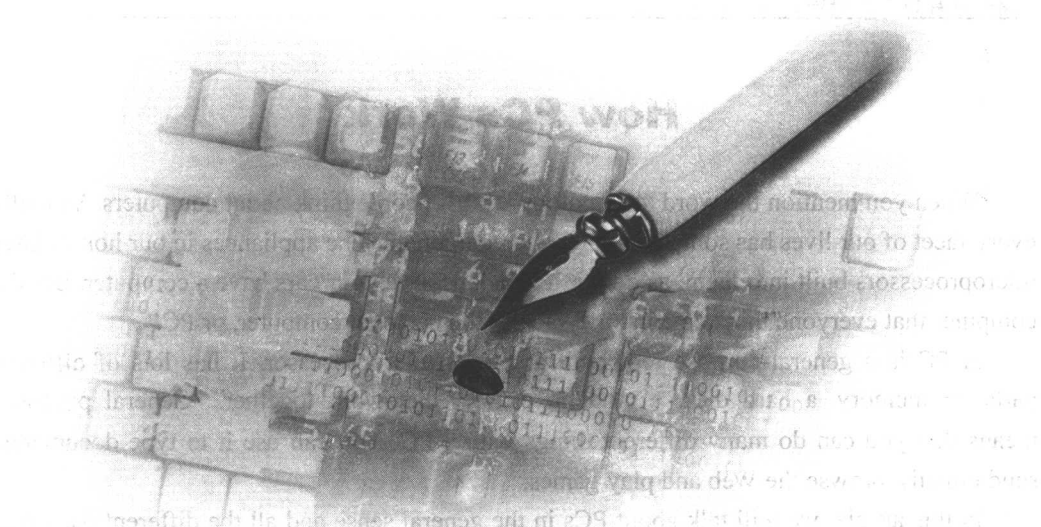
在本书使用过程中，有任何问题，都可以通过电子邮件与我们进行交流，邮件标题请注明姓名及“计算机英语教程（科学出版社）”字样，也望大家不吝赐教。E-mail 地址为：cici12323@tom.com；zqh3882355@sina.com。

本书既可作为高等院校信息类（包括计算机科学与工程、计算机应用与维护、计算机网络、软件工程、信息管理等专业）的专业英语教材，也可供参加计算机行业各种考试的读者备考之用。作为培训班教材和供从业人员自学，亦颇得当。

由于时间及水平所限，本书难免存在不足之处，恳请广大读者批评指正。

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Unit 1 How PCs Work



本章要点

- ◇ 学习核心单词: microprocessor, memory, modem, type, document, storage, cache, motherboard, interface, bus, record, digital, format, keyboard, parallel, network, file, handle
- ◇ 学习词组: hard disk, turn on, circuit board, sound card, power supply, operating system, floppy disk, graphic card, digital cameras, network card
- ◇ 学习缩略语: PC, CPU, RAM, ROM, BIOS, PCI, SCSI, EEPROM, USB



本章学习目标

- ◇ 掌握计算机硬件的基本单词、词组和缩略语
- ◇ 培养阅读能力
- ◇ 培养翻译能力
- ◇ 了解阅读的基本要素

How PCs Work

When you mention the word “technology”, most people think about computers. Virtually every facet of our lives has some computerized component. The appliances in our homes have microprocessors built into them, as do our televisions. Even our cars have a computer. But the computer that everyone thinks of first is typically the personal computer, or PC.

A PC is a general-purpose tool built around a microprocessor. It has lots of different parts — memory, a hard disk, a modem, etc. — that work together. “General purpose” means that you can do many different things with a PC. You can use it to type documents, send e-mails, browse the Web and play games.

In this article, we will talk about PCs in the general sense and all the different parts that go into them. You will learn about the various components and how they work together in a basic operating session. You’ll also find out what the future may hold for these machines.

On the Inside

Let’s take a look at the main components of a typical desktop computer.

1. Central processing unit (CPU)

The microprocessor “brain” of the computer system is called the central processing unit. Everything that a computer does is overseen by the CPU.

2. Memory

This is very fast storage used to hold data. It has to be fast because it is connected directly to the microprocessor. There are several specific types of memory:

- Random-access memory (RAM)—Used to temporarily store information that the computer is currently working with.
- Read-only memory (ROM)—A permanent type of memory storage used by the computer for important data that does not change.
- Basic input/output system (BIOS)—A type of ROM that is used by the computer to establish basic communication when the computer is first turned on.
- Caching—The storing of frequently used data in extremely fast RAM that connects directly to the CPU.

3. Virtual memory

Space on a hard disk used to temporarily store data and swap it in and out of RAM as needed.

- Motherboard—This is the main circuit board that all of the other internal components connect to. The CPU and memory are usually on the motherboard. Other systems

may be found directly on the motherboard or connected to it through a secondary connection. For example, a sound card can be built into the motherboard or connected through PCI.

- Power supply—An electrical transformer regulates the electricity used by the computer.
- Hard disk—This is large-capacity permanent storage used to hold information such as programs and documents.
- Operating system—This is the basic software that allows the user to interface with the computer.
- Integrated Drive Electronics (IDE) Controller—This is the primary interface for the hard drive, CD-ROM and floppy disk drive.
- Peripheral Component Interconnect (PCI) Bus—The most common way to connect additional components to the computer, PCI uses a series of slots on the motherboard that PCI cards plug into.
- SCSI—Pronounced “skuzzy”, the small computer system interface is a method of adding additional devices, such as hard drives or scanners, to the computer.
- AGP—Accelerated Graphics Port is a high-speed connection used by the graphics card to interface with the computer.
- Sound card—This is used by the computer to record and play audio by converting analog sound into digital information and back again.
- Graphics card—This translates image data from the computer into a format that can be displayed by the monitor.

Connections: Input/Output

No matter how powerful the components inside your computer are, you need a way to interact with them. This interaction is called input/output (I/O). The most common types of I/O in PCs are:

1. Monitor

The monitor is the primary device for displaying information from the computer.

2. Keyboard

The keyboard is the primary device for entering information into the computer.

3. Mouse

The mouse is the primary device for navigating and interacting with the computer.

4. Removable storage devices

Removable storage devices allow you to add new information to your computer very

easily, as well as save information that you want to carry to a different location.

- Floppy disk—The most common form of removable storage, floppy disks are extremely inexpensive and easy to save information to.
- CD-ROM—CD-ROM (compact disc, read-only memory) is a popular form of distribution of commercial software. Many systems now offer CD-R (recordable) and CD-RW (rewritable), which can also record.
- Flash memory—Based on a type of ROM called electrically erasable programmable read-only memory (EEPROM), Flash memory provides fast, permanent storage. CompactFlash, SmartMedia and PCMCIA cards are all types of Flash memory.
- DVD-ROM—DVD-ROM (digital versatile disc, read-only memory) is similar to CD-ROM but is capable of holding much more information.

Connections: Ports

- Parallel — This port is commonly used to connect a printer.
- Serial — This port is typically used to connect an external modem.
- Universal Serial Bus (USB) — Quickly becoming the most popular external connection, USB ports offer power and versatility and are incredibly easy to use.
- FireWire (IEEE 1394) — FireWire is a very popular method of connecting digital-video devices, such as camcorders or digital cameras, to your computer.

Defining a PC

Here is one way to think about it: A PC is a general-purpose information-processing device. It can take information from a person (through the keyboard and mouse), from a device (like a floppy disk or CD) or from the network (through a modem or a network card) and process it. Once processed, the information is shown to the user (on the monitor), stored on a device (like a hard disk) or sent somewhere else on the network (back through the modem or network card).

We have lots of special-purpose processors in our lives. An MP3 Player is a specialized computer for processing MP3 files. It can't do anything else. A GPS is a specialized computer for handling GPS signals. It can't do anything else. A Gameboy is a specialized computer for handling games, but it can't do anything else. A PC can do it all because it is general-purpose.

New Words

facet	['fæsɪt]	<i>n.</i> 方面
computerize	[kəm'pjʊ:təraɪz]	<i>vt.</i> 用计算机处理, 使计算机化
microprocessor	[maɪkrəu'prəʊsesə]	<i>n.</i> 微处理器
purpose	['pɜ:pəs]	<i>n.</i> 目的, 意图, 用途, 效果, 决

memory	['meməri]	心, 意志
modem	['məudəm]	vt. 打算, 企图, 决心
type	[taip]	n. 存储器, 内存
		n. 调制解调器
document	['dɒkjumənt]	n. 类型, 铅字
send	[send]	v. 打字, 输入
browse	[brauz]	n. 公文, 文件, 文档
web	[web]	vt. 送, 寄, 发送
various	['veəriəs]	v. 浏览
		n. 环球网
component	[kəm'pəunənt]	adj. 不同的, 各种各样的, 多方面的, 多样的
oversee	['əuvə'si:]	n. 成分, 部分, 部件
storage	['stɔridʒ]	v. 管理, 监视
		v. 存储
		n. 存储器
data	['deitə]	n. 资料, 数据
temporarily	['tempərəri]	adv. 临时
store	[stɔ:]	vt. 贮藏, 贮备, 存储
information	['infə'meifən]	n. 信息
permanent	['pə:mənənt]	adj. 永久的, 持久的
communication	[kə.mju:'ni'keifn]	n. 通信
frequently	['fri:kwəntli]	adv. 常常, 频繁地, 经常地
cache	[kæʃ]	n. 高速缓冲存储器
extremely	['iks'tri:mli]	adv. 极端地, 非常地
swap	[swɔp]	v. 交换
		n. 交换
motherboard	['mʌðəbɔ:d]	n. 主板, 母板
transformer	[træns'fɔ:mə]	n. 变压器
regulate	['regjuleit]	vt. 控制, 调节, 校准
interface	['intəfeis]	n. 界面, 接口
controller	[kən'trəulə]	n. 控制器
bus	[bʌs]	n. 总线
slot	[slɔt]	n. 插槽
scanner	['skænə]	n. 扫描器
record	['rekɔ:d]	vt. 记录
audio	['ɔ:diəu]	adj. 音频的, 声频的, 声音的
digital	['didʒitl]	adj. 数字的, 数位的, 手指的
		n. 数字, 数字式

translate	[træns'leit]	vt. 翻译, 解释, 转化, 转变为 vi. 翻译, 能被译出
image	['imidʒ]	n. 图像
format	['fɔ:mæt]	n. 格式
display	[di'splei]	vt. 显示
monitor	['mɒnitə]	n. 显示器, 监视器
device	[di'vais]	n. 装置, 设备
keyboard	['ki:bɔ:d]	n. 键盘
mouse	[maʊs]	n. 鼠标
removable	[ri'mu:vəbl]	adj. 抽取式的, 可移动的
recordable	[ri'kɔ:dəbl]	adj. 可记录的
rewritable	[ri'raitəbl]	adj. 可改写的
similar	['similə]	adj. 相似的, 类似的
capable	['keipəbl]	adj. 有能力的, 有可能的, 可以……的
parallel	['pærəlel]	adj. 平行的
port	[pɔ:t]	n. 端口
connect	[kə'nekt]	vt. 连接, 联合
printer	['printə]	n. 打印机
serial	['siəriəl]	adj. 串行的
versatility	[və:sə'tiləti]	n. 多功能性
camcorder	['kʌmkɔ:də]	n. 便携式摄像录音一体机
network	['netwɜ:k]	n. 网络
file	[faɪl]	n. 文件
handle	['hændl]	n. 柄, 句柄 vt. 处理, 操作

Phrases

hard disk	硬盘
find out	找出, 发现, 认识到, 想出
look at	看, 考虑, 着眼于
work with	与……共事, 与……合作, 对……起作用
turn on	启动, 开启, 开始
virtual memory	虚拟内存
circuit board	电路板
sound card	声卡
power supply	电源

operating system	操作系统
floppy disk	软盘
plug into	把插头插入, 接通
convert ... into ...	把……转换为……
graphic card	图形卡
flash memory	闪存
digital camera	数码相机
network card	网卡

Abbreviations

PC (personal computer)	个人电脑, 个人计算机
CPU (central processing Unit)	中央处理器
RAM (random-access memory)	随机存储器
ROM (read-only memory)	只读存储器
BIOS (basic input/output system)	基本输入/输出系统
PCI (peripheral component interconnect)	外部部件扩展接口
IDE (integrated drive electronics)	集成电路设备
CD-ROM(compact disc, read-only memory)	只读光盘
SCSI (small computer system interface)	小型计算机系统接口
EEPROM(electrically erasable programmable read-only memory)	电可擦除只读存储器
DVD-ROM (digital versatile disc, read-only memory)	数字只读通用光盘
USB (universal serial bus)	通用串行总线
GPS (global position system)	全球定位系统

Notes

1) But the computer that everyone thinks of first is typically the personal computer, or PC.

本句中, that everyone thinks of first 是一个定语从句, 修饰和限定 the computer, PC 是 personal computer 的缩写。or 的意思是“就是”、“即”、“或者说”。例如:

He studied geology, or the science of the earth's crust in the university.

他在大学学的是地质学, 即研究地壳的科学。

I'd like to buy a kilo, or two pounds of potatoes.

我想买一千克, 也就是两磅的土豆。

2) A type of ROM that is used by the computer to establish basic communication when the computer is first turned on.

that is used by the computer to establish basic communication when the computer is first turned on 是一个定语从句，修饰和限定 A type of ROM。在该定语从句中，by 引出动作的执行者 the computer，to establish basic communication 是一个动词不定式短语，做目的状语，修饰和限定 is used，when the computer is first turned on 是一个时间状语从句，也修饰和限定 is used。

3) This is large-capacity permanent storage used to hold information such as programs and documents.

本句中，used to hold information such as programs and documents 是一个过去分词短语，做定语，修饰和限定 large-capacity permanent storage。该过去分词短语可以扩展为一个定语从句，即：which is used to hold information such as programs and documents。

4) No matter how powerful the components inside your computer are, you need a way to interact with them.

本句中，No matter how powerful the components inside your computer are 是一个让步状语从句，可以改写为：However powerful the components inside your computer are。

英语中，no matter 后面还可以跟 who、what、where、when 等，等于 whoever、whatever、wherever、whenever，意思是“无论谁”、“无论什么”、“无论何处”、“无论什么时候”。例如：

Don't open the door, no matter who comes.

不管谁来都别开门。

Don't trust him, no matter what he says.

无论他说什么，都别相信。

5) Based on a type of ROM called electrically erasable programmable read-only memory (EEPROM), Flash memory provides fast, permanent storage. CompactFlash, SmartMedia and PCMCIA cards are all types of Flash memory.

本句中，Based on a type of ROM called electrically erasable programmable read-only memory (EEPROM) 是一个过去分词短语，做原因状语，修饰和限定 provides。括号中的 EEPROM 是 electrically erasable programmable read-only memory 的缩写。

Reading Material: Choose Your Next PC

You may not have bottomless pockets or an insatiable appetite for consumer goods, yet every year, when the latest desktops and notebooks appear, you keep your eyes peeled for what's new, what's hot, and what will fulfill your computing needs now and later.

Maybe you're in the market for a desktop or notebook you can use to upload your digital videos or download your favorite songs. Or you're an avid gamer looking for the fastest, phattest gaming box. Perhaps you need a reasonably priced midrange system for your home that doesn't skimp on the niceties. Or you want to regain precious real estate on your desk but are loath to relinquish any PC functionality. Maybe you just want to take your files everywhere but don't want to lug a cumbersome setup around.