◆铁路职业教育教材◆

COMPUTER ENGLISH

计算机英语

蒋英华 曹彦国 主编

中国铁道出版社

铁路职业教育教材

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内 容 简 介

本书是为高职、中专计算机专业编写的教材，它综合了计算机知识和科技英语翻译技巧。编写过程中采用了最新的计算机专业技术资料，涵盖计算机软硬件基础知识、计算机网络、计算机病毒及多媒体技术等专业知识。

本书共分为12单元：第1单元介绍计算机发展史；第2单元介绍计算机硬件；第3单元介绍计算机系统软件及应用软件；第4单元介绍操作系统Windows 2000；第5单元介绍数据库概述；第6单元介绍多媒体的基础知识；第7单元介绍计算机网络；第8单元介绍Internet；第9单元介绍电子邮件；第10单元介绍万维网；第11单元介绍网页制作软件Dreamweaver；第12单元介绍计算机病毒的基本知识。

本书每一章均包括：预设问题、课文及注释、练习、阅读材料等内容。

本书可作为高职、中专学生的专业英语教材，也可供有关人员自学参考。

前　言

当前，计算机技术和网络技术的发展可谓日新月异，英文原版的专业技术文章和期刊源源不断地闯入我们的视野，怎样使在校学生迅速接收新的知识，学会学习方法，掌握英文这个必备的语言工具，是当前高职和中等职业学校计算机及应用以及相关专业英语教学中面临的一个紧迫的课题。

为了适应职业教育教学改革的新形势，为社会培养合格的职业人才，使学生在学习过程中学到的知识更具有针对性和实用性，我们组织编写了这本计算机专业英语教材。

本书是编者在多年教学经验的基础上，参考国内外有关教材编写的。它不仅可以作为高职和中专计算机及应用专业、计算机网络专业的专业英语教学用书，同时也可以作为计算机技术人员的自学和培训教材。

本书由蒋英华、曹彦国主编，张建武主审。编写分工如下：第1、2单元由曹彦国编写，第3、7、9单元由吴一峰编写，第4、5单元及本书练习中的屏幕英语由朱蓓芳编写，第6、11、12单元由蒋英华编写，第8、10单元由邵磊编写，附录由张革华编写。

在本书编写过程中得到了天津铁路工程学校、金华铁路司机学校、苏州铁路机械学校、南京铁路职业技术学院等领导和教师的大力帮助和支持，在此深表谢意。

由于作者水平有限，编写时间仓促，如有不当之处，敬请同行不吝赐教。

编　者

2003年2月于天津

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Unit One

Computer Generations

Pre-reading questions

What is a computer?

Computer is a function unit that can perform substantial computation, including numerous arithmetic operations or logic operations, without intervention by human operator during a run.[1]

What is the ENIAC ?

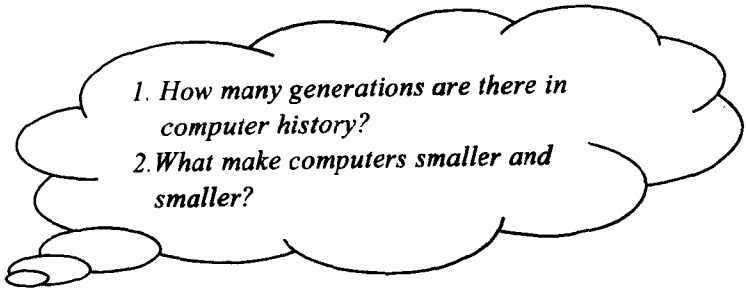
The ENIAC (Electronic Numerical Integrator And Calculator) was developed by J. Presper Eckert and John Mauchly at the University of Pennsylvania(宾夕法尼亚州).[2] The project began in 1943 and was completed in 1946. The machine was huge, it weighed 30 tons and contained over 18 000 vacuum tubes.

The ENIAC was a major advancement for its time. It was the first general-purpose, electronic computing machine and was capable of performing thousands of operations per second.[3] It was con-

trolled, however, by switches and plugs that had to be manually set.[4] Thus, although it was a general-purpose electronic device, it did not have a stored program. Therefore, it did not have all the characteristics of a computer.

Reading

Questions for comprehension:



Computer Generations

Since the ENIAC computers have evolved rapidly. Their evolution has been the result of changes in technology that have occurred regularly. These changes have resulted in four main generations of computers.

1. First-generation computers: 1951～1958

First-generation computers were characterized by the use of vacuum tubes as their principal electronic component. Vacuum tubes are bulky and produce a lot of heat, so first-generation computers were large and required extensive air conditioning to keep them cool. In addition, because vacuum tubes do not operate very fast, these computer were relatively slow.

2. Second-generation computers: 1959～1963

In the second-generation of computers, transistors replaced

vacuum tubes. Although invented in 1948, the first all transistor computer did not become available until 1959. Transistors are smaller and less expensive than vacuum tubes, and they operate faster and produce less heat. Hence, with second-generation computers, the size and cost of computers decreased, their speed increased, and their air-conditioning needs were reduced.

3. Third-generation computers: 1964～1970

The technical development that marks the third generation of computers is the use of integrated circuits or ICs in computers. An integrated circuit is a piece of silicon (a chip) containing numerous transistors. One IC replaces many transistors in a computer, result in a continuation of the trends begun in the second generation. These trends include reduced size, reduced cost, increased speed, and reduced need for air conditioning.

4. Fourth-generation computers: 1971～?

The fourth generation of computers is more difficult to define than the other three generations. This generation is characterized by more and more transistors being contained on a silicon chip. First there was Large Scale Integration (LSI), with hundreds and thousands of transistors per chip, then came Very Large Scale Integration (VLSI), with tens of thousands and hundreds of thousands of transistors. The trend continues today.

New Words and Phrases

New Words

function['fʌŋkʃ(ə)n] n. 函数(过程);功能
perform[pə'fɔ:m] v. 执行,完成
substantial[səb'stænʃ(ə)l] adj. 实质的
numerous['nju:mərəs] adj. 许多的,大量的
logic['lɔdʒik] n. 逻辑,逻辑学
intervention [intə'venʃ(ə)n] n. 干预,干涉,紧急

project['prɔdʒekt] n. 计划,工程
complete[kəm'pli:t] vt. 完成,使完善
contain[kən'tein] vt. 包含,容纳,容忍
major['meidʒə(r)] adj. 重点(要),(大)多数
general-purpose adj. 多方面的,多种用途的
electronic[ilek'trɔnik] adj. 电子的
control[kən'trəul] vt. 控制,操纵
switch[switʃ] n. 开关,转换
plug[plʌg] n. 塞子,插头
manually['mænjuəli] adv. 手控,人工
program['prəugræm] n. 程序,计划
characteristic[kæriktə'ristik] n. 性能,特性
generation[dʒenə'reiʃ(ə)n] n. (世)代,(发展)阶段
evolve[i'vɔlv] v. (使)发展,(使)进化
technology[tek'nɔlədʒi] n. 科技,技术
occur[ə'kə:(r)] vi. 发生,出现
regularly['regjuləli] adv. 有规律地,有规则地
main[mein] adj. 主要,重要的
principal['prinsəpl] adj. 主要的,首要的
component[kəm'pəunənt] n. 成分;元件
bulky[bʌlki] adj. 大的,容量大的
produce[prə'dju:s] vt. 出现,生产
require[ri'kwaiə(r)] vt. 需要,要求,命令
extensive[ik'stensiv] adj. 广大的,广泛的
transistor[træn'zistə(r)] n. 晶体管
available[ə'veiləbl] adj. 可利用的
hence[hens] adv. 因此,从此
decrease[di'kri:s] v. 减少,递减
increase[in'kri:s] v. 增加,加大
reduce[ri'dju:s] vt. 减少,缩小
silicon['silikən] n. [化]硅,硅元素
chip[tʃip] n. 芯片,小(晶)片
trend['trend] n. 趋势
define[di'fain] v. 定义;分辨
scale[skeil] n. 刻度,比例,天平

Phrases

function unit 功能设备
arithmetic operations 算术运算

logic operations 逻辑运算
during a run 在运行期间
in addition 另外
integrated circuit 集成电路(IC)
Large Scale Integration (LSI) 大规模集成电路
Very Large Scale Integration (VLSI)超大规模集成电路
be capable of 有……能力的

Notes

[1] Computer is a function unit that can perform substantial computation, including numerous arithmetic operations or logic operations, without intervention by human operator during a run.

计算机是能实现基本运算的一种功能设备,其中包括大量的算术运算或逻辑运算,在运行期间无需操作员去干预。

"that can perform substantial computation"是定语从句,修饰先行词"unit"。

科技英语中,句子的某个中心词常常被若干个后置定语或定语从句所修饰。例如:

The technical development that marks the third generation of computers is the use of integrated circuits or ICs in computers.

标志着第三代计算机的技术进步是集成电路在计算机中的使用。

句中 "that marks the third generation of computers"是定语从句,修饰主语"The technical development"。

[2] The ENIAC was developed by J.Presper Eckert and John Mauchly at the University of Pennsylvania.

ENIAC 是由 J.Presper Eckert 和 John Mauchly 在美国的宾夕法尼亚州的一所大学里研制出来的。

在科技英语中,有三分之一以上的句子用被动语态,为的是要强调所论述的客观事物,作为句子的主语,放在句首,以突出其重要性。例如:

First-generation computers were characterized by the use of

vacuum tubes as their principal electronic component.

第一代计算机的特征是:真空管作为它的主要电子元件。

[3] It was the first general-purpose, electronic computing machine and was capable of performing thousands of operations per second.

它是第一个多用途的电子计算机,每秒能执行数千条操作指令。

[4] It was controlled, however, by switches and plugs that had to be manually set.

然而,它必须由手动的开关和插头控制。

句中 however 表示转折,它可以放在句中的任何地方,但译成中文时,我们一般放在句首。

Exercises

Ⅰ. Multiple Choice Questions(选择题)

1. Computer is a function unit that can ____ substantial computation, including numerous arithmetic operations or logic operations.

A. run　　B. perform

C. execute　　D. carry out

2. The ENIAC was huge, it weighted 30 tons and ____ over 18 000 vacuum tubes.

A. included　　B. composed

C. comprised　　D. contained

3. The ENIAC was the first general-purpose, electronic computing machine and ____ performing thousands of operations per second.

A. was able to　　B. was capable of

C. was capable to　　D. was able of

4. With the development of ____ computers have evolved rapidly.

A. technology　　B. technical

C. technique　　D. technically

5. First-generation computers were characterized by the use of ____ as their principal electronic component.

A. vacuum tubes B. transistor

C. silicon D. IC

6. With second-generation computers, the size and cost of computers ____, their speed increased, and their air-conditioning needs were reduced.

A. reduced B. decreased

C. increased D. enhanced

7. An integrated circuit is a piece of ____(a chip) containing numerous transistors.

A. silicon B. iron

C. copper D. gold

8. ____ with tens of thousands and hundreds of thousands of transistors.

A. LSI B. VLSI

C. IC D. Integrated Circuit

Ⅱ. **Word Formation(构词法)(一)**

英语的词汇构成有很多种,它是根据已有的词再加上某种前后缀,或以词根生成,或以构词成分形成新的词。

前缀由一个或几个字母组成,放在词根或单词之前,组成一个新词。每一前缀都有一定的含义。前缀一般不超过五六个字母。加了前缀的单词其词性一般不发生变化,只改变原来单词的意思。以下列举常用的前缀:

(1) multi- 多

program 程序—multiprogram 多道程序

(2) inter- 相互,在……间

national 民族的—international 国际的

(3) hyper- 超级

media 媒体 —hypermedia 超媒体

(4) micro- 微型

computer 计算机—microcomputer 微机

(5) tele- 远程的

phone 声音— telephone 电话

请写出下列词的词义：

internet multimedia microprocessor
hypertext microelectronic

Ⅲ. **Translations**(英汉翻译)

1. This is the software _____(我想买的).

2. Mouse is an instrument _____(操作员经常使用的).

3. This machine _____(是由计算机控制的).

4. Our printer _____(约翰正在修理).

5. _____(计算机中的病毒) has been found out.

Ⅳ. **Reading Materials**(阅读材料)

The History of Computers

Nothing epitomizes modern life better than the computer. For better or worse, computers have infiltrated every aspect of our society. Today computers do much more than simply compute: supermarket scanners calculate our grocery bill while keeping store inventory; computerized telephone switching centers play traffic cop to millions of calls and keep lines of communication untangled; and automatic teller machines (ATM) let us conduct banking transactions from virtually anywhere in the world. But where did all this technology come from and where is it heading? To fully understand and appreciate the impact computers have on our lives and promises they hold for the future, it is important to understand their evolution.

"Who invented the computer?" is not a question with a simple answer. The real answer is that many inventors contributed to the history of computers and that a computer is a complex piece of machinery made up of many parts, each of which can be considered a separate invention. This series covers many of the major milestones in computer history (but not all of them) with a concentration on the history of personal home computers.

MODERN COMPUTERS

Computer History Year/ Enter	Computer History Inventors/Inventions	Computer History Description of Event
1936	Konrad Zuse-Z1 Computer	First freely programmable computer.
1942	John Atanasoff & Clifford Berry ABC Computer	Who was first in the computing biz is not always as easy as ABC.
1944	Howard Aiken & Grace Hopper Harvard Mark I Computer	The Harvard Mark I computer.
1946	John Presper Eckert & John W. Mauchly ENIAC I Computer	20 000 vacuum tubes later...
1948	Frederic Williams & Tom Kilburn Manchester Baby Computer & The Williams Tube	Baby and the Williams Tube turn on the memories.
1947/1948	John Bardeen, Walter Brattain & Wiliam Shockley The Transistor	No, a transistor is not a computer, but this invention greatly affected the history of computers.
1951	John Presper Eckert & John W. Mauchly UNIVAC Computer	First commercial computer & able to pick presidential winners.
1953	International Business Machines IBM 701 EDPM Computer	IBM enters into "The History of Computers".

续上表

Computer History Year/ Enter	Computer History Inventors/Inventions	Computer History Description of Event
1954	John Backus & IBM FORTRAN Computer Programming Language	The first successful high level programming language.
1958	Jack Kilby & Robert Noyce The Integrated Circuit	Otherwise known as "The Chip".
1962	Steve Russell & MIT Spacewar Computer Game	The first computer game invented.
1964	Douglas Engelbart Computer Mouse & Windows	Nicknamed the mouse because the tail came out the end.
1969	ARPAnet	The original Internet.
1970	Intel 1103 Computer Memory	The world's first available dynamic RAM chip.
1971	Faggin, Hoff & Mazor Intel 4004 Computer Microprocessor	The first microprocessor.
1971	Alan Shugart & IBM The "Floppy" Disk	Nicknamed the "Floppy" for its flexibility.
1973	Robert Metcalfe & Xerox The Ethernet Computer Networking	Networking.
1974/1975	Scelbi & Mark-8 Altair & IBM 5100 Computers	The first consumer computers.
1976/1977	Apple I, II & TRS-80 & Commodore Pet Computers	More first consumer computers.
1978	Dan Bricklin & Bob Frankston VisiCalc Spreadsheet Software	Any product that pays for itself in two weeks is a surefire winner.
1979	Seymour Rubenstein & Rob Barnaby WordStar Software	Word Processors.
1981	IBM The IBM PC - Home Computer	From an "Acorn" grows a personal computer revolution.