21 世纪高等院校计算机基础系列教材

计算机专业英语

Computer English

北京希望电子出版社 总策划
陈枫艳 主 编
汤丽娜 罗永莲 贾永胜 副主编

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内 容 简 介

本书旨在使读者掌握计算机专业英语术语，培养和提高读者阅读和笔译专业英语文献资料的能力，并通过课堂英语交流和团队式讨论题来提高学生英语口语运用能力。

本书中的英语短文语言地道、文字优美，融知识性、趣味性、实用性为一体。

全书共分15章，涵盖了计算机基础词汇、常用短语、常见句型以及各种计算机文献。每个单元由对话、课文、词汇和短语、注释、练习组成。为了提高读者对计算机英语的运用能力和团队协作能力，每个单元最后还特别准备了若干个供读者练习口语的讨论题。

本书可以作为高等院校计算机专业的英语教材，也可供计算机专业人员及其他有兴趣的读者学习参考，同时本书可以作为高等院校计算机基础的双语教材。

需要本书或需要得到技术支持的读者，请与北京清河 6 号信箱（邮编100085）发行部联系，电话：010-82702660 010-82702658，010-62978181转 103 或 238，传真：010-82702698，E-mail：tbd@bhp.com.cn

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21世纪高等院校计算机教材编委会名单

（排名不分先后）

总　序

21世纪挑战与机遇并存，没有足够的知识储备必将被时代所抛弃。中国IT教育产业竞争日趋激烈，用户需求凸现个性，行业发展更需要理性。未来5年IT行业将以18%的速度连续增长，将引发IT产业新的发展高潮。实现信息产业大国的目标，应该依赖教育，要圆信息产业强国的梦想，依然要寄托于教育，IT教育事业任重道远，其产业也正面临着机遇与挑战。

我国的计算机教学长久以来一直重原理、轻应用。高等院校的计算机教学机制和教材对计算机本身的认识都存在误区。要改革高校计算机教学，教材改革是重要方面，用计算机教材的改革促进基础教育的改革势在必行。

一本好书，是人生前进的阶梯；一套好教材，是教学成功的保证。为缓解计算机技术飞速发展与计算机教材滞后落伍的矛盾，我们通过调查多所院校的师生，并多次研讨，根据读者认识规律，开创出一种全新的方式，打破过去介绍原理——理论推导——举例说明的样式，增加实用操作性，通过上机实验与课上内容结合来增强可读性，用通俗易懂的语言和例子说明复杂概念。

本套教材的特点一是“精”，精选教学内容；二是“新”，捕捉最新资讯；三是“特”，配备电子课件，力争达到基础性、先进性、全面性、典型性和可操作性的最大统一。

为保证教材质量，我们同时聘请了一批学术水平较高的知名专家、教授作为本套教材的主审和编委。全套教材包括必修课教材20多种，选修课教材和学习配套用书10余种，基本上涵盖了目前高等院校（含高等职业技术学院、高等专科学校、成人高等学校）计算机科学与技术专业所必修或选修的内容。各种教材编写时既注意到内容上的连贯性，又保证了教学上的相对独立性。

本套教材在内容的组织上，大胆汲取当今计算机领域最新技术，摒弃了传统教材中陈旧过时的内容。这些变化在各本教材中都得到了不同程度的体现。本套教材编写时既参照了教育部有关计算机科学与技术专业的教学要求，又参考了“程序员考试大纲”和“全国计算机水平等级考试大纲”的内容，因此既适合作为高等学校计算机科学与技术专业教材，也可作为计算机等级考试学习用书。

考虑到各校教学特点和计算机设备条件，我们本着“学以致用”的理念，在本套教材编写中自始至终贯彻“由浅入深，理论联系实际”的原则，以阐明要义为主，辅之以必要的例题、习题和上机实习，能够使学生尽快领悟和掌握。

在本套教材编写过程中，作者们付出了艰辛的劳动，教材编委会的各位专家、教授对本套教材进行了认真的审定和悉心地指导。书中参考、借鉴了国内外同类教材和专著，在此一并表示感谢。

我们希望更多的优秀教师参与到教材建设中来，真诚希望广大教师、学生与读者朋友在使用本套教材过程中提出宝贵意见和建议。

若有投稿或建议，请发至本丛书出版者电子邮件：textbook@bhp.com.cn

21世纪高等院校计算机教材编委会

前　言

随着计算机与网络的普及，人类已经从工业社会步入了信息社会。无论是在工业、农业、教育、国防，还是在航天、材料、生化及遗传工程领域，计算机无处不在，几乎无所不能。

我们可以看到，英语是了解计算机技术的最直接、最便利的语言工具——新的计算机技术通过英语这个渠道流入和传播，谁掌握了计算机英语，谁就占有掌握最新技术的优势。

因此，如果我们想要掌握最新的计算机和网络技术，就需要具有较高的英语水平和较丰富的计算机知识。本书旨在帮助读者提高计算机英语的阅读、听说和写作能力。

本书中的英语短文语言地道、文字优美，融知识性、趣味性、实用性为一体。

全书共分 15 章，涵盖了计算机基础词汇、常用短语、常见句型和各种计算机文献的风格特点，主要内容为计算机入门、电子邮件与文件下载、硬件基础知识、硬件的存储系统、硬件的输入/输出设备、软件的系统软件和应用软件、计算机网络、因特网与万维网、电子商务与电子交易、数据库的基础知识、数据库的应用和有关计算机的社会问题。每个单元由对话、课文、词汇和短语、注释、练习组成。为了提高读者对计算机英语的运用能力和团队协作能力，每个单元最后还特别准备了若干个供读者练习口语的讨论题。

本书由陈枫艳主编，汤丽娜、罗永莲、贾永胜等也参与了本书的部分编写工作。本书可作为大学本、专科学生计算机英语教材，也可供计算机爱好者和英语爱好者使用，同时，本书还可作为计算机公共基础的双语教材。

书中个别单词或短语专业性较强，读者可酌情取舍。由于时间仓促，书中难免有不当之处，敬请读者不吝赐教。

编　者

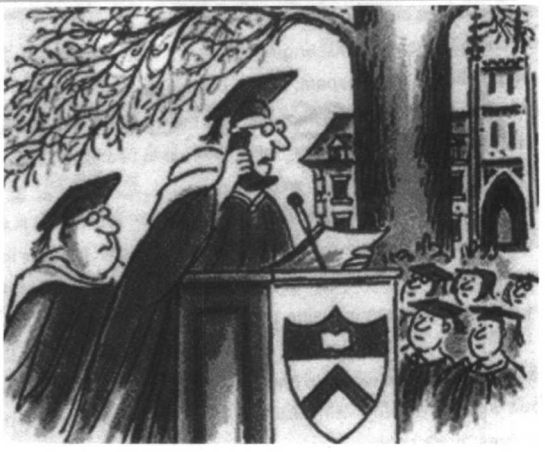
目　录

Unit 1

Access to Computers

Part I Dialogue

Pair Work: Practice the following with your partner



A: Hello! My name is David.

B: How are you? I am Susan.

A: I'm fine, thanks. And you?

B:Fine, too. Are you from the English Department?

A: No, I'm a computer major.

B: Oh, really? You speak English quite well.

A: Thank you. What's your major? English?

B: Yes. But I'm not good at computer. Can you help me when you're free?

A: Of course, I can.

B: It's very nice to meet you today.

A: Me, too.

Pair Work: **Please create your own dialogues according to the given situations**

1. Assuming that you meet with your classmates in a net bar.
2. Assuming that you get to know a new friend in the English corner.
3. Discuss the influence of computers in your life.

Part II TEXT A

COMPUTERS IN OUR LIVES

In 1970s, it was not essential for the average people to know how to use a computer in his or her job and it was uncommon to have a computer at home. Computers were large and expensive, and few people had access to them. Furthermore, the use of computers generally required a lot of

technical knowledge. Most computers used in organizations just carried out high-volume paperwork processing, such as issuing bills and keeping track of customer and product balances. Most ordinary working people were afraid of computers and there were few good reasons for getting familiar with them.

Suddenly things began to change. Microcomputers[1]—inexpensive personal computers or PCs[2]— were created and computer use increased dramatically. This increased use of computers has affected our personal lives, as well as changed the way many companies do business and the skills they seek in the people they hire.

Figure 1-1

Figure 1-2

Today we are living in the midst of a computer revolution, where many jobs heavily depend on the creation, collection, use, and dissemination of information. What's more, this revolution is showing no signs of slowing down but accelerating. Whether you become a teacher, lawyer, doctor, professional athlete, executive, or skilled tradesperson, your performance will largely depend on information and your use of it. Today's computers, with their almost dizzying speeds and high level of accuracy and reliability, are continually taking on new roles in our society.

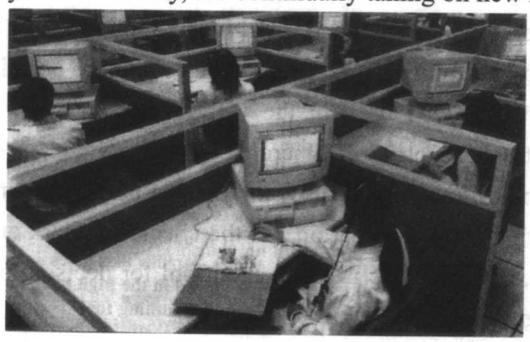


Figure 1-3

Now, you can learn to use a computer without a complete understanding of the technical

1 Microcomputer: 微型计算机。
2 PC: Personal Computer 个人电脑或个人计算机。

details of how a computer works. Yet, a little knowledge gives you a big advantage. Knowing something about cars can help you to make wise purchases and save money on repairs. Likewise, knowing something about computers can help you buy the right one for your needs, use it for maximum benefit, and give you a much higher level of comfort and confidence along the way. Therefore, computer literacy[3]— knowing and understanding computers and their uses— is essential today for everyone.

The proliferation of traditional and new types of computers in the home has increased home computing dramatically over the last few years. The home office has taken on greater importance since more and more people are doing some type of work at home. Use of the Internet at home to exchange e-mail, shop online, download music and software, and so forth has also led to special Internet appliances- easy to use devices designed for specific tasks, such as accessing the Internet or checking e-mail. These appliances commonly incorporate the roles of more than one traditional appliance, such as the telephone or television, in addition to their computing capabilities. This trend is called convergence.

Figure 1-4

Figure 1-5

It is also becoming more common to have a smart home in which household tasks (such as watering the lawn, turning on and off the air conditioning, and making coffee) can be controlled by a main home computer. Smart appliances—traditional appliances with some type of computer technology or connectivity built in—are expected to be even more prominent in the future.

Though computers have been used in the workplace for years, their role is continually evolving. Originally just a research tool for computer experts and then a productivity tool for office workers, the computer today is used by all types of employees in all types of businesses. From the CEO of a multinational corporation[4], to the check-out clerk at the grocery store, to the package delivery person, the computer is a universal tool for decision making, productivity, and communications (see Figure 1-1, Figure 1-2, Figure 1-3).

In addition to being found in the home and the workplace, computers are encountered and used in day-to-day life, such as shopping, running errands, dining in a restaurant, getting a car repaired. As they become more and more integrated in our society, computers are also becoming

3 Computer literacy: 计算机读写能力。
4 Multinational corporation: 跨国公司。

more invisible and easy to use (see Figure 1-4, Figure 1-5, Figure 1-6, Figure 1-7). Kiosks featuring screens that you touch with your finger are commonly found in hotels, conference centers, retail stores, and other public locations to allow you to easily look up information. Computers and devices for accessing the Internet are found in virtually all schools and public libraries, as well as in many airports, health clubs, hotel rooms, taxis, and restaurants. Many service professionals, such as waiters, auto technicians, and delivery people, use computers to keep track of customers.

It is also becoming increasingly common for individuals to carry Web-enabled cell phones, handheld computers, or similar portable devices to remain in touch with others and obtain stock quotes, driving directions, airline flight updates, and other needed information while on the go. Some computers are even small enough to be embedded in clothing or worn as a watch or other accessory.

This ability of computers to sort through massive amounts of data and quickly produce useful information for almost any kind of user, from teenager to payroll clerk to corporate president, makes them indispensable tools in our society. Without computers, businesses could never function at the level they do today. Banks would be overwhelmed by the job of tracking all the transactions they process. Familiar airline and telephone services would be impossible. Moon exploration and the space shuttle would still belong to science fiction, and scientific advances such as DNA[5] analysis and gene mapping would be nonexistent.

The prominence of information technology over the last few decades has resulted in this time period being referred to as the information age. Now, according to many experts, we are entering a new information revolution. Many believe that the last major information revolution was the invention of the printing press in the mid-1450s; today's information revolution is usually thought of as being tied to the vast amount of information accumulated and distributed via the Internet. As discussed next and throughout this text, the availability of this huge collection of information has a great deal of advantages, but it has some disadvantages, as well.

The benefits of having such a computer-oriented society are numerous. The speed, accuracy, and reliability of computers have changed the way we do business not just at a management level as initially projected, but on day-to-day operations. The capability to design, build, and test new buildings and other structures before the actual construction begins has led to safer buildings and a more efficient development cycle. The ability to have beginning medical students perform virtual surgery using a computer instead of performing actual surgery on a patient is obviously a better option. The ability to shop, pay bills, do product research, and look up the vast amount of information available through the Internet from home or wherever you happen to be at the time is a huge convenience that few would have even dreamed about even a decade ago. And the ability of businesses to be open for business 24 hours a day, 7 days a week, 365 days a year via the Internet and operate more efficiently, as well, is a distinct advantage.

5 DNA: deoxyribonucleic acid 脱氧核糖核酸。

Figure 1-6

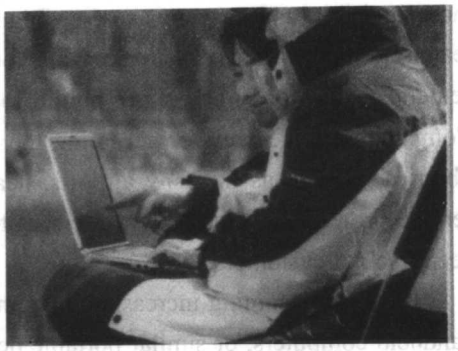


Figure 1-7

Along with the benefits of a computer-oriented society, computers have brought a variety of problems ranging from health concerns to personal security and privacy issues to ethics. Many businesses are feeling pressured to quickly become prepared to do business via the Internet or risk being left behind. Many jobs have also evolved with the emergence of the computer, such as including tasks previously performed by a secretary or an assistant, simply because the worker can now have a computer on his or her desk, briefcase, or pocket.

As far as privacy is concerned, individuals need to be aware of the vast amount of information that can be accumulated about them and distributed to others. Such information can be obtained from their online[6] and offline[7] buying history, as well as available public information, such as home purchases. The accumulation and distribution of information are important factors of our new-networked economy, but it is one area of great concern to many consumers.

WORDS AND EXPRESSIONS

essential [i'senʃəl] *adj.*本质的，基本的 *n.*本质，实质，要素，要点
average ['ævəridʒ] *n.*平均，平均水平，平均数 *adj.*一般的，平均的
access ['ækses] *n.*通路，访问，入门 *vt.*存取，接近
paperwork ['peɪpəwɜ:k] *n.*文书工作
issue ['iʃju:] *n.*出版，发行，（报刊等）期，问题 *vt.*使流出，发行，出版
keep track of 记录
dramatically [drə'mætɪkəlɪ] *adv.*戏剧地，引人注目地
dissemination [di,semi'neiʃən] *n.*分发
accuracy ['ækjurəsi] *n.*精确性，正确度
executive [ig'zekjutiv] *adj.*实行的，执行的，行政的 *n.*执行者，经理主管人员

6 online 联机，在线。
7 offline 脱机，离线。

tradesperson *n.* 商人，店主，零售商
dizzy ['dizi] *adj.* （指人）晕眩的，昏乱的，（指地点，情况）使人晕眩的
reliability [ri,laiə'biliti] *n.*可靠性
purchase ['pə:tʃəs] *vt.*买，购买 *n.*买，购买
maximum ['mæksiməm] *n.*最大量，最大限度，极大 *adj.*最高的，最多的，最大极限的
confidence ['kɔnfidəns] *n.*信心
and so forth 等等
appliance [ə'plaiəns] *n.*用具，器具
convergence [kən'vɜ:dʒəns] *n.*集中，收敛
lawn [lɔ:n] *n.*草地，草坪
connectivity [kənek'tiviti] *n.*连通性
prominent ['prɔminənt] *adj.*卓越的，显著的，突出的
evolve [i'vɔlv] *v.*（使）发展，（使）进展，（使）进化
check out *v.*付账后离开，检验，合格，及格
grocery ['grəusəri] *n.*<美>食品杂货店，食品，杂货
encounter [in'kauntə] *v.*遭遇，遇到，相遇 *n.*遭遇，遭遇战
day-to-day *adj.*日常的，逐日的
errand ['erənd] *n.*差事，差使，使命
kiosk ['ki:ɔsk] *n.*亭子
virtually ['vɜ:tjuəli] *adv.*事实上，实质上
cell phones 手机
portable ['pɔ:təbl] *adj.*轻便的，手提（式）的，便携式的
stock [stɔk] *n.*库存，股票，股份 *vt.* 进货，备有
quote [kwəut] *vt.*引用，引证，提供，提出，报（价）
on the go 在进行活动，忙碌，刚要动身
embed [im'bed] *vt.*使插入，使嵌入，深留，嵌入
accessory [æk'sesəri] *n.*附件，零件，附加物 *adj.*附属的，补充的，同谋的，副的
sort [sɔ:t] *vt.* 分类，整理，拣选
indispensable [,indis'pensəbl] *adj.*不可缺少的，绝对必要的
overwhelm ['əuvə'welm] *vt.*淹没，覆没，受打击，制服，压倒
transaction [træn'zækʃən] *n.*办理，处理，交易，处理事务
space shuttle 航天飞机
science fiction 科幻，科学幻想小说
gene mapping 基因图谱
nonexistent [,nɔnɪg'zɪstənt] *adj.*不存在的
printing press *n.* 印刷机
accumulate [ə'kju:mjuleit] *v.*积聚，堆积
distributed [dis'tribju:tid] *adj.*分布式的
via ['vaiə, 'vi:ə] *prep.*经，通过，经由
availabilaty [ə,veilə'biliti] *n.*可用性，有效性，实用性
computer-oriented *adj.* 面向计算机的，研究计算机的
reliability [ri,laiə'biliti] *n.* 可靠性
initially [ɪ'nɪʃəlɪ] *adv.*最初，开头
project ['prɔdʒekt] *n.*计划，方案，事业，企业，工程

efficient [i'fiʃənt] *adj.*（直接）生效的，有效率的，能干的
virtual ['vəːtjuəl, -tʃuəl] *adj.* 虚拟的
option ['ɔpʃən] *n.*选项，选择权，买卖的特权
convenience [kən'viːnjəns] *n.*便利，方便，有益，方便的用具、机械、安排等
range from...to 在……和……范围内变化
ethic ['eθik] *n.*道德规范，伦理
emergence [i'məːdʒəns] *n.*浮现，露出，（植物）突出体，出现
previously ['priːvjuːslɪ] *adv.*先前，以前
briefcase ['brɪfkeɪs] *n.* 公文包
as far as sb. be concerned 至于；就……而言
available [ə'veiləbl] *adj.*可用到的，可利用的，有用的
distribution [ˌdistri'bjuːʃən] *n.*分配，分发，配给物，分布状态

Part III TEXTB

NETWORKS AND THE INTERNET

A computer network ties computers together so that users can share hardware, software, and data, as well as electronically communicate with each other (See Figure 1-8). Many networks use a network server to manage the data flowing through the network devices.

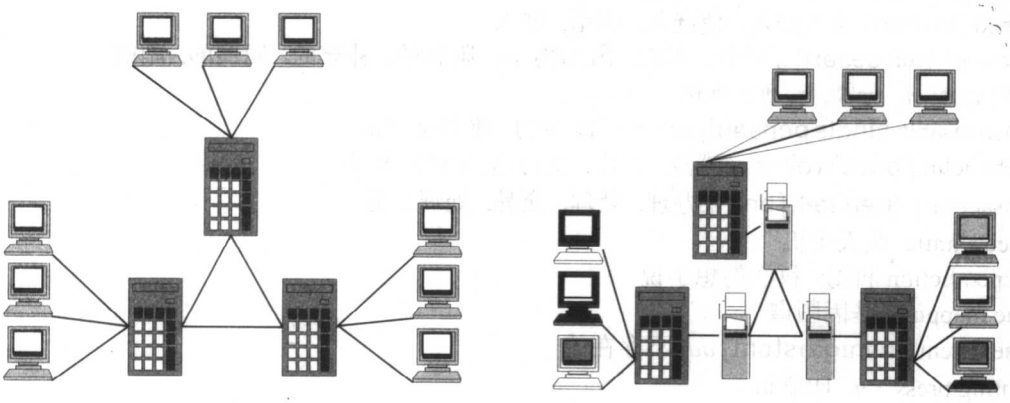


Figure 1-8 Network

Computer networks exist in many sizes and types. For instance, a home network might connect two computers inside the home to share a single printer and Internet connection. A small office network of five or six desktop computers might enable workers to share an expensive

printer and a common bank of files on a very-high-capacity disk drive[8], both of which are also connected to the network. A large corporate network, which can connect all of the offices or retail stores of a corporation, is an example of a much larger network, as is the Internet, which ties together thousands of networks and millions of users throughout the world.

The Internet

The Internet is the largest and most well-known computer network in the world. It is technically a network of networks, since an individual user connects to a network set up by their access provider or Internet service provider (ISP)[9], which in turn is connected to a larger network, which may be connected to an even larger network (See Figure 1-9). All together, this network of networks is referred to as the Internet. Since all the networks on the Internet are interconnected, any computer with Internet access can communicate with any other computer on the Internet, regardless of the ISP used.

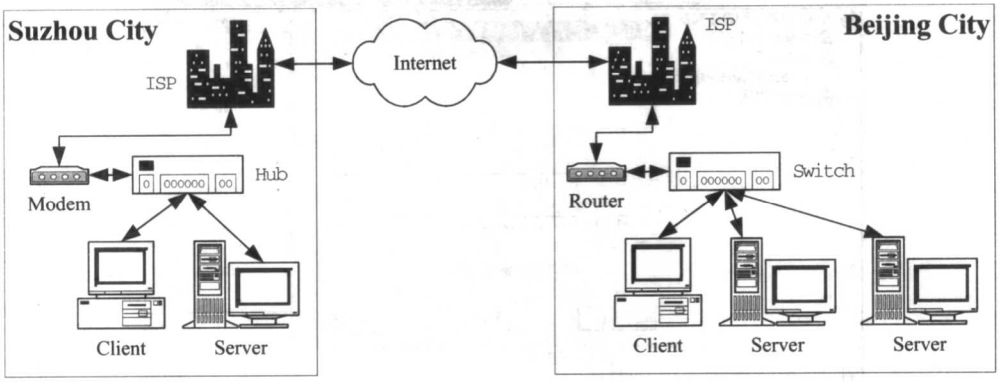


Figure 1-9 How Internet Works

Millions of computers of all sizes, millions of people from all walks of life, and thousands of organizations worldwide are connected to the Internet. The two most common Internet activities today are exchanging e-mail, electronic messages, and accessing the World Wide Web (WWW)[10].

The World Wide Web consists of a huge collection of Web pages that are available over the Internet. There are Web pages for virtually any topic. You can access product information, current news and weather, airline schedules, government publications, music downloads, and so forth, as well as shop, bank, buy and sell stock, and other types of online financial transactions.

Accessing Networks

To access a computer network, you need a modem (which sends and receives data over

8 Disk drive: 磁盘驱动器。
9 Internet service provider (ISP): 因特网服务提供商。
10 World Wide Web (WWW): 万维网。