Practical IT English

实用IT英语

王翔　主编

吕英芳　张臻　耿坤　王彦　副主编

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内 容 简 介

本书依照"教、学、做"一体的 IT 英语课程建设要求，以提高学生在未来工作中实际使用 IT 英语的技能水平为目的，根据高职高专学生特点，较为系统地讲述 IT 英语知识和基本技能，强调实用性、基础性及 IT 英语学习的可持续性。

全书共有 32 单元，每单元除专业课文及难度不大的配套练习外，还大量引用了知名企业当今主流产品英文的介绍和使用说明书，为学生提供与未来实际工作接轨的仿真环境。全书内容涵盖计算机软硬件基础知识、多媒体技术、网络技术、电子商务及嵌入式技术等专业英语知识；并将课文参考译文、练习参考答案等内容作为共享电子资源。

本书可作为高职高专学生的 IT 英语或计算机英语教材，也可供从事 IT 相关专业的工作人员或关心、爱好 IT 业的朋友们学习参考。

前　言

在 IT 知识与技能迅速更新和 IT 产业不断升级的信息时代背景下，IT 英语在计算机类专业学生的技能培训方面，正在扮演着越来越重要的角色。特别是随着我国在面向全球的计算机软硬件外包领域所取得的长足发展，IT 企业对具有较高专业英语应用水平的应届 IT 类专业毕业生的需求人数急剧增加。具备良好的 IT 英语应用技能，已成为求职者进入 IT 企业、行业的"敲门砖"。

本书在教学要求上，强调 IT 领域的专业术语及相关技术的英语表述和阅读方法，不将公共英语方面的内容作为教学重点，从而避免与《大学英语》、《实用英语》等教材的重叠；在编写内容上，强调广泛地讲述和介绍 IT 英语知识与技能，力求使读者能较为全面地掌握使用 IT 英语的思想和方法，并对以后继续深入学习 IT 英语奠定基础，不对某一知识或某一技术细节着太多笔墨，从而避免与 IT 类其他中文专业教材的重叠。

培养高素质、技能型人才已经成为高职高专类院校的人才培养目标。因此，学习企业和行业工作者需要的 IT 英语知识和技能，避免今天所学内容与明天工作需求不相吻合的情况，是本书编写的出发点。本书大量引用国内外知名 IT 企业当今主流产品的介绍和使用说明书，力求为读者提供一个仿真的工作环境，全面提升学生在未来实际工作中使用 IT 英语的技能水平和职业素养。

本书在编写过程中，参考了大量的文献资料，其中部分内容来自互联网，特别是 IT 领域一些知名厂商和机构官方网站，在此向这些文献资料的作者深表谢意。来自 IT 行业和企业界的专家、学者也对本书的编写提出了宝贵建议，编者在此一并表示感谢。

本书由王翔任主编，吕英芳、张臻、耿坤、王彦任副主编。本书第 1～12 单元由王翔编写，第 13～16 单元由耿坤编写，第 17～20 单元由吕英芳编写，第 21～28 单元由张臻编写，第 29～32 单元由王彦编写。孙慧芹、李宏力、李勤、郝玲、赵家华、贾海瀛、李莉、王炯、张林中、艾艳锦、薛继霜、傅春、王晓星参与了本书的译文、专业词汇整理等部分的编写工作。

我们愿意为使用本书的教师、学生、IT 业工作人员及计算机爱好者提供该领域的帮助，请通过电子邮箱 pingfan6699@163.com 与我们联系。为更好地服务于教学，编者已将本书课文部分的译文、专业词汇缩写及习题参考答案作为共享资源供大家下载使用。

尽管我们依照"教、学、做"一体的 IT 英语课程建设要求，在 IT 英语教材建设突破方面做出了许多努力，但由于编者的水平有限，加之时间仓促，书中内容难免有错误、不足和疏漏之处，恳请各教学单位、行业和企业的工作人员及广大读者不吝赐教、批评指正。

编　者
2011 年 6 月

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Unit 1   The Development of Computer Technology

WORDS AND EXPRESSIONS

manipulate [mə'nipjuleit]   操作
Maryland ['mɛərilænd]   马里兰州
Pennsylvania [pensil'veinjə]   宾夕法尼亚州
semiconductor ['semikən'dʌktə]   半导体
transistor [træn'zistə]   晶体管
fingernail ['fiŋgəneil]   手指甲
Harvard ['hɑ:vəd]   美国哈佛大学
Dartmouth ['dɑ:tməθ]   美国达特茅斯
enthusiasts [in'θju:ziæst]   热心家，狂热者
fledgling ['fledʒliŋ]   无经验的人
unprecedented [ʌn'presidəntid]   空前的
kilobyte ['kiləubait]   千字节，1,024 字节
automate ['ɔ:təmeit]   使自动化，自动操作
novice ['nɔvis]   新手，初学者
underestimated ['ʌndər'estimeit]   低估，看轻
abruptly [ə'brʌpt]   突然地，唐突地
dub [dʌb]   授予···以称号；给···起（绰号）
prestige [pres'ti:ʒ]   声望，威望
fad [fæd]   时尚
productivity [,prɔdʌk'tiviti]   生产力
drop-out ['drɔp,aut]   中途退学的人
vacuum tube   电子管，真空管
ENIAC   Electronic Numerical Integrator And Calculator Computer   电子数字积分计算机
Ballistics Research Laboratory   弹道学研究工作实验室
large-scale integrated ['intigreitid] (LSI) circuit   大规模集成电路
very large-scale integrated (VLSI) circuit   超大规模集成电路
International Business Machines (IBM)   美国国际商用机器公司
Intel   美国英特尔公司
Microsoft   美国微软公司

QUESTIONS AND ANSWERS

1. Do you think that computers have become one of the most important helpful "partners" of human beings? Why?

2. What did engineers develop in the late 1960s and early 1970s?

3. What is the phylogeny of Microsoft?

4. Who designed and developed Apple?

5. What is the difference between IBM and Apple?

6. What were the first generation programs?

7. Can you tell us something about Bill Gates?

8. What is the relationship between Computers and Internet?

9. When did many application packages begin to appear?

10. When did IBM introduce its own microcomputer IBM PC?

TEXT

As is known to all that computers have played an important role in the modern society. High up in space and deep down in oceans, they are used to make the scientific discoveries; on farms and in factories, they help us to do difficult work and take the place of routine jobs. Computer to human being is like food to our bodies, without food we cannot survive; without computers the world would not be what it is today.

The first electronic computers were built in the 1940s. At that time, John Louis von Neumann announced the famous stored program concept which says that the program is stored as data in the computer's memory and the computer is able to manipulate it as data—to load it from disk, store it back on disk, and move it in memory. This concept became a fundamental of modern computing. Meanwhile, the Ballistics Research Laboratory in Maryland decided to build a high-speed electronic computer to assist in the preparation of firing tables for artillery. It was built at the University of Pennsylvania's Moore School of Electrical Engineering. This machine became known as ENIAC (Figure 1-1).
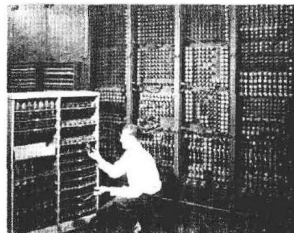

Figure 1-1   ENIAC

ENIAC covered an area of 1,800 square feet, weighted 30 tons. This machine was so huge, because it used 18,000 vacuum tubes. The use of the transistor in computers in the late 1950s meant more powerful, more reliable, and less expensive computers that would occupy less space and give off less heart than did vacuum tube powered computers.

In the late 1960s and early 1970s, engineers made great strides in reducing the size of electronic components. They developed the semiconductor chip, which was about the size of a fingernail and could contain hundreds of transistors. The semiconductor chips enabled engineers to miniaturize the circuits contained in all electronic devices. Most importantly, it produced a new generation of mainframes and minicomputers with increased capability, greater speed, and smaller size.

The microprocessor became a reality in the mid-1970s with the introduction of the large-scale integrated (LSI) circuit and the very large-scale integrated (VLSI) circuit (microchip), with many thousands of interconnected transistors etched into a single silicon substrate. In late 1970 Intel introduced a 1k RAM chip and the 4004, a 4-bit microprocessor. Four years later came the 8080, an 8-bit microprocessor. The earliest microcomputer, the Altair 8800, was developed in 1975 by Ed (Edwin) Roberts; this machine used the Intel 8080 microprocessor and had less than 1 kilobyte of memory.

In order for microcomputers to become problem-solving tools, a number of hurdles needed to be overcome. The first was to simplify the program for the machines. One step in this direction was taken by a young Harvard drop-out named Bill Gates, who wrote a version of the programming language BASIC for one of the earliest microcomputers. BASIC had been introduced at Dartmouth College in the mid-1960s by John Kemeny and Kenneth Kurtz. Thus it was a popular programming language on mainframe computers. Gates founded a computer company called Microsoft, which has become one of the major producers of software for microcomputers.

In 1977, Steven Jobs and Stephen Wozniak, two microcomputer enthusiasts, working in a garage, designed their own microcomputer. This was to be named the Apple II (Figure 1-2). And their fledgling business was to become the Apple Computer Corporation. Business grew at an unprecedented rate. In no time, Apple was selling hundreds and then thousands of machines per month.
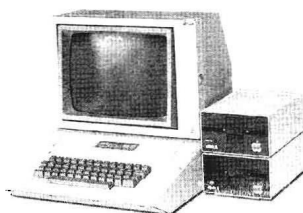

Figure 1-2   Apple II

One reason behind Apple's success was the availability of number of useful application programs. The most important of these was spreadsheet VISICALS, which allowed accountants and financial planners to automate many of the calculations that they were accustomed to doing on adding machines, or with pencil and paper. Hours of calculations were thus completed in a matter of seconds. Such raw power did much to convince peoples that microcomputers were real problem-solving tools, not toys.

At about the same time as the introduction of the Apple Ⅱ, a number of the microcomputers appeared on the market. One of the most popular computers was Tandy Corporation's TRS-80. Apple and Tandy were the two largest manufacturers, each with about a 25 percent share of the market.

Early microcomputer users banded together into groups to exchange ideas and to share solutions to problems. A strong spirit of adventure encouraged users to feel they were participating in a major intellectual turning point in computer use. Part of the excitement was created by the unusual mixture of people who participated. In addition to computer scientists and engineers, physicians, business people, and students become microcomputer enthusiasts, at work as well as at home. All were interested in the same goal: using microcomputers to solve problems.

So many application packages began to appear around 1980. The first generation programs for word processing, data management, spreadsheets, and communication allowed novice users to experience the power of microcomputing.

However, most corporations underestimated the significance of bringing computing power down to the level of the individual users. This view abruptly changed in 1981 when International Business Machines (IBM), the largest computer company in the world, introduced its own microcomputer, dubbed the IBM PC ("PC" being the abbreviation for personal computer). The fact that IBM, a company of such corporate prestige, would enter this market convinced businesses that the microcomputer was more than a passing fad. Within a short time, the microprocessor was recognized as a productivity tool to be used by workers at all levels to process, store, retrieve, and analyze information. Almost every business could find a legitimate place for the microcomputer (Figure 1-3).

Figure 1-3   IBM 386

Now, there is a light-weight, notebook computer, or portable computer (Figure 1-4), designed to be moved easily.
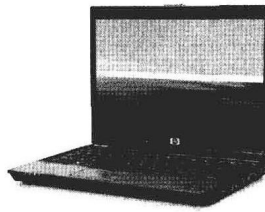
Figure 1-4　HP Compaq 2510p

EXERCISES

1. Judge whether the following given statements are true or false. If correct, write T in parentheses; otherwise, write F.

(1)　(　) The first electronic computers were built in the 1950s.

(2)　(　) ENIAC used 18,000 transistors.

(3)　(　) Intel 8080 is an 16-bit microprocessor.

(4)　(　) In 1977, Steven Jobs and Stephen Wozniak designed their own microcomputer in a garage.

2. Complete the following note-taking with the information mentioned in the text.

(1)　John Louis von Neumann announced the famous _____concept which says that the program is stored as data in the computer's memory and the computer is able to manipulate it as data.

(2)　The use of the _____ in computers in the late 1950s meant more powerful, more reliable, and less expensive computers.

(3)　In addition to computer scientists and engineers, physicians, business people, and students become _____, at work as well as at home.

(4)　IBM, a company of such corporate prestige, would enter this market convinced businesses that the _____ was more than a passing fad.

READING MATERIALS

Product Description 1: Lenovo G Series Laptop (Figure 1-5)

Figure 1-5　Lenovo G560

All the tools you need for everyday computing in a worry-free, easy-to-use notebook with stunning good looks—at equally attractive prices!

Smart and affordable never looked so good

➢ Sleek finishes, including hairline or textured (depending on model).

➢ Thin design for great portability.

➢ Full-sized ergonomic keyboard.

➢ Convenient right-side numeric keypad on G550, G555 and G560 models.

For your viewing pleasure

Select G Series models let you enjoy high-definition, widescreen movies without the black horizontal bars thanks to a 16:9 aspect ratio. Plus LED backlight technology is thinner, lighter and minimizes energy consumption.

Supercharged graphics and gaming

Jump into games and video. The latest high-definition, 3-D and audio technologies on select G Series models give your multimedia experience a boost:

➢ High-definition graphics.

➢ Enhanced video playback.

➢ Fast applications.

➢ Wider sound stage.

Get more done in less time

The latest multi-core processor technologies help speed computing tasks, even when you're working in more than one application simultaneously, so you can do more and do it faster. High-performance memory makes applications more responsive, lets you quickly burn DVD and lets you easily compress and open large documents.

Worry-free security features

➢ G Series laptops give you something priceless: peace of mind. Protect your PC and its important data with state-of-the-art security technology.

➢ OneKey™ Rescue System lets you restore your system and recover valuable data from a virus attack or crash with the touch of a button.

➢ VeriFace™ controls access to your notebook by using your face as your logon password and recording the faces of others who try to log on or leave you a message.

➢ Lenovo Energy Management, our advanced power and battery-management software, helps you easily control your laptop's energy usage with a simple interface and a quiet mode for studying or working.

➢ Multimedia features like the integrated camera, integrated microphone, HDMI connector and optical disc drive provide a great multimedia experience at home or on the go.

➢ Lenovo offers a wide variety of systems preloaded with the newest Windows® 7 operating system.

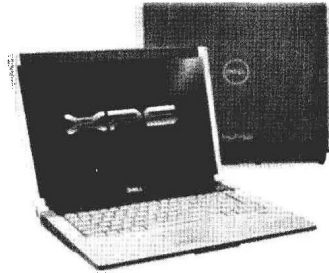# Product Description 2: Dell XPS Laptop (Figure 1-6)

Figure 1-6   Dell XPS Laptop

Movies, games, music and Web chat come to life with leading-edge graphics, 3D capabilities, high-definition (HD) video chat and sound that can fill a room.

> Leading-edge NVIDIA® performance graphics bring your media to life.
> Get high-fidelity JBL® speakers with Waves MaxxAudio® 3.
> Get the first Skype™-certified laptop — video chat with HD Webcam.
> Enjoy 3D on the big screen2 with integrated NVIDIA 3DTV Play™ software. Check out the Dell 3D Learning Center.
> Turbocharge your performance with Intel® Core™ i5 Processors with four-way multitask processing and Intel® Turbo Boost Technology.

Feel the Rush

Powerful graphics. Powerfully smart. The XPS™ 14 laptop has what it takes to take you to new levels of performance.

Razor-Sharp Graphics Come Standard

The XPS 14 comes with standard leading-edge NVIDIA® performance graphics3 (available up to 2 GB) for powerful photo and video editing and high-resolution gaming with breathtaking detail.

Smart Power Management

> Long media marathons are no problem with smart power management that helps extend battery life when you need it.
> Optimus™ technology automatically optimizes your battery life while maintaining the graphics performance you expect (completely, seamlessly and transparently) whether you're watching an HD movie, surfing the Web or playing a 3D game (available with Core i5 configurations only).

Mind-Blowing Audio

> XPS laptops are designed to be the loudest, clearest and cleanest laptops on the planet with built-in high-fidelity JBL speakers and Waves MaxxAudio® technology. Together they produce rich, full sound that delivers booming bass and razor-sharp clarity to your favorite movies, music and games.

> ➢ Treat your ears to peak audio performance with the XPS's 6W JBL speakers. Then, layer in the Waves algorithms — designed to deliver better dynamic range, frequency response and imaging — with maximum transparency, clarity and natural sound.
> ➢ Together, these technologies enable you to take the surround-sound experience of your home theater with you wherever you go.

Your Life in Hi-Def

XPS laptops have the tools that bring your world to you, wherever you are.

Ultra-Clear. Ultra-Flexible.

Connect with your loved ones across the globe in stunning high definition using the internet and XPS 14's HD Webcam. It's the first Webcam to offer HD video streaming for ultra-clear 720p resolution. The extreme flexibility of the new XPS also enables you to record video using different bit rates, depending on the application you use.

Connect to the World

Video conferencing is now even easier with Dell and Skype™4. The new XPS 14 is one of the first laptops to be certified by Skype and offers preinstalled Skype software standard on every XPS 14.

Movies, Games and 3D Videos Come to Life

> ➢ XPS laptops are the first Dell laptops to offer integrated NVIDIA 3DTV5 Play technology. This enables you to leverage the 3D processing power of GeForce® graphics to create an immersive 3D experience in your own home, on the big screen.
> ➢ Simply connect your laptop to your 3D-enabled TV and effortlessly project your favorite Blu-ray6 3D movies and 3D photo slideshows for a real-life theater experience. Then, bring your best games7 to life. Using the power of your laptop and your 3D TV, you can step into an eye-popping 3D gaming experience right in your living room. All you need to harness the 3D power of your XPS 14 is a high-definition multimedia interface (HDMI) cable, optional Blu-ray Disc™ drive, approved 3D-enabled TV and 3D media2.

Smarter, faster Intel Core i5 processors come standard

> ➢ Experience solid performance for everyday applications and additional speed when you need it most with the Intel® Core™ i5 Processor.
> ➢ Get more done with Intel Turbo Boost Technology that automatically adapts processing speed to accommodate what you are doing.
> ➢ Four way multitasking with Intel® Hyper-Threading Technology enables each core of the processor to work on two tasks at the same time.

Simple and Smart Support

Dell DataSafe Online

Our online backup service offers data protection by enabling customers to back up data to a safe, remote storage site using a broadband connection. Dell DataSafe Online Backup is easy, flexible and secure. After setup, it will automatically back up data to help protect your data from software, hardware and catastrophic failure.

Dell Support Center

Our centrally located, easy-to-use application provides personalized support resources. Conveniently located on your PC's desktop with quick links to service, support and system resources. Helps keep your system up-to-date and running efficiently through automated fixes for common configuration issues.

The Characteristics of IT English

科技英语（Science and Technology English）是在自然科学和工程技术领域中的使用及随着科学技术的迅速发展而逐渐形成的一种英语文体。我国著名科学家钱三强同志曾指出："科技英语在许多国家已经成为现代英语的一个专门的新领域。" IT 英语属于科技英语范畴，相对于公共英语（General English），IT 英语中的复杂长句、被动语态和非谓语动词等语言形式出现的比较频繁；此外，在 IT 技术迅猛发展的过程中，IT 专业英语中的新术语和新的知识描述语言也在不断出现。

1. 复杂长句使用实例

System software, which consists of programs that control the operations of the computer and its devices, serves as the interface between a user and the computer's hardware.

复杂长句在 IT 英语中是比较常见的，此类长句中往往包含若干个从句和非谓语动词短语，而从句和短语间又相互制约和依附，从而形成从句中含短语、短语中带从句的复杂语言现象。此例句中有一个主句和两个定语从句，剖析句意时，应首先抓住主句，再研究定语从句与主句之间如何衔接的问题。

例句译文：系统软件作为用户与计算机硬件之间的接口，是由控制计算机及相关设备操作的程序所构成。

2. 被动语态使用实例

The procedure by which a computer is told how to work is called programming.

在 IT 英语中，着重说明客观事物和过程，被动语态有助于将事物的过程和结果置于句子的中心地位，突出讨论的对象，从而有利于 IT 英语实现着重演绎论证的目的；被动语态的表达较主动语态相对客观，回避了人的主观感觉及其体现的个人感情色彩，从而满足科技作品在描述现象、论证推理时对于客观公正性的要求；此外，被动语态可使句子更为紧凑、简短，符合科技文章严谨、精炼的标准。

例句译文：告诉计算机如何工作的过程称为程序设计。

3. 非谓语动词使用实例

In communications, the problem of electronics is how to convey information from one place to another.

英语每个简单句只允许使用一个谓语动词，其余动作须使用非谓语动词形式，这也是为什么英语特别是科技英语中非谓语动词使用频繁的原因。

例句译文：在通讯系统中，电子学要解决的问题是如何把信息从一个地方传递到另一个地方。