

21 世纪全国应用型本科计算机案例型规划教材

计算机专业英语(第 2 版)

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北京大学出版社
PEKING UNIVERSITY PRESS

内 容 简 介

本书是一本面向 21 世纪的计算机专业英语教材,它主要涉及计算机基础知识、计算机专业知识以及计算机前沿技术,具体包括计算机硬件、计算机语言、软件工程、数据库、Internet、Windows 7 操作系统、.NET 技术、网络安全、分布式系统、数字媒体技术、游戏动画、嵌入式系统、物联网、云计算以及人工智能等领域的知识和技术。全书以最新的计算机文献和经典原版教材为基础,选材以突出新技术与实用技术且难度适当为目标,并配有同步对照的词汇注释、练习题以及实用的科技英语语法,使读者能够快速掌握计算机专业英语的特点和大量的专业词汇,并对相关的计算机领域知识有所扩展。同时为了方便查阅词汇,正文中还附有词汇表。本书在第 1 版的基础上增加了目前计算机领域的最新研究热点和前沿知识,能够拓展读者的知识面并使其迅速了解计算机应用的发展方向。

本书可供高等院校计算机专业及相关专业的本、专科学生使用,也可作为计算机水平考试的考生、计算机爱好者以及 IT 领域的工程技术人员的参考用书。

图书在版编目(CIP)数据

计算机专业英语/张勇,段君玮主编. —2 版. —北京:北京大学出版社,2012.9

(21 世纪全国应用型本科计算机案例型规划教材)

ISBN 978-7-301-21088-8

I. ①计… II. ①张…②段… III. ①电子计算机—英语—高等学校—教材 IV. ①H31

中国版本图书馆 CIP 数据核字(2012)第 186403 号

书 名: 计算机专业英语(第 2 版)

著作责任者: 张 勇 段君玮 主编

策 划 编 辑: 郑 双

责 任 编 辑: 郑 双 程志强

标 准 书 号: ISBN 978-7-301-21088-8/TP · 1237

出 版 者: 北京大学出版社

地 址: 北京市海淀区成府路 205 号 100871

网 址: <http://www.pup.cn> <http://www.pup6.cn>

电 话: 邮购部 62752015 发行部 62750672 编辑部 62750667 出版部 62754962

电 子 邮 箱: pup_6@163.com

印 刷 者: 河北滦县鑫华书刊印刷厂

发 行 者: 北京大学出版社

经 销 者: 新华书店

787 毫米×1092 毫米 16 开本 21.25 印张 486 千字

2008 年 8 月第 1 版 2012 年 9 月第 2 版 2012 年 9 月第 1 次印刷

定 价: 42.00 元

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和现状以及网络安全等；第9章以微软的VB.NET和C#.NET为例，介绍了.NET框架和技术；第10章介绍了分布式系统的特征、面临的挑战以及分布式系统的体系结构模型；第11章介绍了人工智能的相关知识；第12章介绍了数字媒体的最新研究领域和相关技术；第13章介绍了嵌入式系统的相关知识和技术；第14章介绍了物联网的基本概念和相关技术；第15章介绍了云计算的基本知识和相关技术。

本书的第1、3、9、10章由张勇老师编写，第4、5、7章由段君玮老师编写。其余章节由张春华、肖萍萍、李伟光、邢肿、李倩、崔钢、崔立新、宋小华几位老师共同编写。

由于编者水平有限，不当之处敬请读者批评指正！

编 者
2012年3月

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How do you use your computer?

In most cases, the choice between a desktop and a laptop computer depends on the way you expect to use this particular machine. If you're planning to carry the computer with you when you travel for business, or if you want to take the computer on vacation with you to **surf** the Internet while your family surfs the waves on a **beach**, the choice is obvious: You need a laptop portable. On the other hand, if you are looking for an office machine that never moves away from your workspace, a desktop computer is the better choice.

To make a good decision, think about the way you expect to work with your computer:

- Will you always use it in the same location, or will you carry it from one place to another?
- Do you expect to use your computer away from your own home or office?
- If you're in business, do you expect to use the computer in your **clients'** or customers' offices or on a job site?
- If you're a student, will you take the computer to class and use the same computer at home or in your dorm room? How about taking notes in the library or **laboratory**? Will you want to take this computer home during vacations?
- If you plan to use the computer at home, do you want to carry it from one room to another? If it's portable, will your children take it to their bedrooms and bury it under their toys or **laundry**?
- Are you buying this computer to share among two or more users who don't always work at the same location?
- Do you want to use this computer in places where **AC** power is not easily accessible?
- Will you have limited space in the location where you expect to use your computer?
- Is **security** important? Do you want to make sure that nobody else can use the computer when you're not there? Do you want to protect the computer (and the data stored on its drives) from theft and damage?

In general, you need a laptop if you expect to move the

surf [sə:f]

vt. 在激浪上驾(船), 在.....
冲浪; [计] 冲浪

beach [bi:tʃ]

n. 海滩

client ['klaɪənt]

n. [计] 顾客, 客户, 委托人

laboratory

[lə'bɒrətəri, 'læbərətəri]

n. 实验室

laundry ['lɔ:ndri]

n. 洗衣店, 要洗的衣服, 洗熨

AC

abbr. Alternating Current, 交流电

security [si'kjʊərɪti]

n. 安全

computer around. That might mean carrying it from one room to the next, or anywhere in between. If you plan to keep the computer in the same place all the time, a desktop computer is usually the way to go.

It's not always that easy. Sometimes, one type or the other might appear to be more **convenient**, but one or more specific features could drive your choice in the other direction. The rest of this chapter describes specific characteristics of each type that might contribute to your choice.

convenient [kən'vi:njənt]

adj. 便利的, 方便的

Summary.

When you're thinking about a new computer, it's essential to decide which type meets your specific requirements.

The most important advantages of desktop computers are related to economy and the size of the components inside and outside the case. Bigger keyboards and screens make it easier to use your computer, while the modular construction and extra space inside the box allow you (or your service technician) to repair or **modify** the computer more easily. On the other hand, those big cases and **external** devices are all heavy and bulky, so they're more difficult to move around.

modify ['mɒdɪfaɪ]

vt. 更改, 修改

v. 修改

external [eks'tɜ:nl]

adj. 外部的, 客观的,

Exercises

I. Fill in the blanks with the information given in the text.

1. A _____ computer usually has most of its components in a modular case.
2. A desktop computer is bigger and more _____ than a laptop.
3. The newest _____ computers, known as tablets, have touch-sensitive screens that are often attached to the keyboard section with rotating hinges.
4. Microsoft has designed support for tablets into the most recent versions of the Windows _____.
5. A _____ computer is a self-contained, lightweight, portable unit that can operate on battery power.
6. The most common laptop design is sometimes _____ as a clamshell because it opens up like a big bivalve, with the keyboard in the bottom half and the screen in the top.
7. In most cases, the choice between a desktop and a laptop computer depends on the way you expect to use this _____ machine.
8. If you are looking for an office machine that never moves away from your workspace, a _____ computer is the better choice.

II. Translate the following passages from English into Chinese.

There's a third alternative that might be worth your attention when you're trying to decide what kind of computer to buy. If you expect to use the computer in a single location most of the time, but you want the convenience of a portable when you take your twice-a-year business trips and on those rare evenings and

it's better and less costly to buy a new system, but just about every desktop computer has room for **economical** improvement. The most common and effective motherboard has one or more **sockets** for memory modules, so you can increase the total amount of memory by adding one or more new modules to the memory that is already in place. You can also remove the existing memory and replace it with the same number of modules with more memory on each module. Adding memory is easier in a desktop system because there's plenty of space inside the case.

Except for a few very small cases, all desktop computers have two or more internal **drive bays**. Therefore, you can add storage **capacity** by installing another hard drive to the system simply by **mounting** the drive in a vacant drive bay and connecting a couple of cables. It's not necessary to transfer the data already stored on the existing drive first.

The **CPU** chip in a desktop system—the central processing unit that controls everything else—is also relatively easy to remove and replace with a faster CPU with similar architecture, and that fits in the same socket. A new CPU can offer faster processing and better performance than the one that was **originally** supplied with the computer. Unlike most of the other integrated circuits on the motherboard, the CPU mounts in a special socket that uses a **latching** mechanism to hold it in place, so it's not necessary (or possible) to solder a new chip directly to the printed circuit board.

All of these upgrades are easy to perform, but they often require some changes to the computer's hardware or software **configuration**. Before you try an upgrade, consult the computer manual or the motherboard manual for information about jumpers or switch settings on the motherboard, and **adjustments** to the BIOS settings (the BIOS—basic input/output system—is the set of programs the computer uses to test hardware and load Windows or some other operating system).

Desktops take up a lot of space.

Desktop computers do have some drawbacks. A desktop case with a separate keyboard occupies more physical space than a more **compact** laptop computer. For most of us, the space on our desks or worktables is prime real estate, so a computer with a

economical [i:kə'nɒmɪkəl]

adj. 节约的, 经济的

socket ['sɒkɪt]

n. 窝, 穴, 孔, 插座, 牙槽

drive bays

驱动槽

capacity [kə'pæsɪti]

n. 容量, 生产量, 容量, 智能, 能力, 才能, 接受力, 地位

mount [maʊnt]

vt. 爬上, 使上马, 装上, 设置, 安放

CPU

abbr. Central Processing Unit
中央处理单元, 中央处理器

originally [ə'ridʒənəli]

adv. 最初, 原先

latching ['lætʃɪŋ]

n. 闭塞, 闭锁, 关闭

configuration

[kən.fɪg.ju'reɪ.ən]

n. 构造, 结构, 配置, 外形

adjustment [ə'dʒʌstmənt]

n. 调整, 调节, 调节器

compact ['kɒmpækt]

adj. 紧凑的, 紧密的, 简洁的

smaller footprint is highly desirable. This may be less of an issue today than it used to be, because flat-panel monitors are much less **intrusive** than the old **cathode-ray tube** displays that were often 18 inches or more from front to back.

Desktops are difficult to transport.

Desktop computers are big and heavy. If you ever have to move your desktop system with all its **accessories** and **accouterments** from one room to another, you probably want to use a cart with several shelves, or at least an office chair with wheels. Then you must find and attach at least half a dozen different cables to the back of the box or convince your local computer expert to do it for you before you can use the computer again. Moving a desktop computer is a complicated and **time-consuming** exercise.

Desktops require external power.

On one hand the electrical **circuits**, fan motors, and disk drives in your computer use DC power from the power supply inside the case. On the other hand, the power supply, along with your video display and other external accessories, needs a source of **domestic** AC power (110 volts in North America and Japan, 220 volts in most other places). If there isn't a wall outlet nearby, you need some kind of **generator**, or a big battery with an inverter, or an extremely long extension cord.

intrusive [in'tru:siv]

adj. 打扰的, 插入的

cathode-ray tube

阴极射线管

accessory [æk'sesəri]

n. 附件, 零件, 附加物

accouterment [ə'ku:təmənt]

n. 穿着, 配备, 饰物

time-consuming

adj. 耗时的

circuit ['sə:kit]

n. 电路, 一圈, 周游, 巡回
电路

domestic [də'mestik]

adj. 家庭的, 国内的, 与人共
处的, 驯服的

generator ['dʒenəreɪtə]

n. 发电机, 发生器

Exercises

I. Fill in the blanks with the information given in the text.

1. A desktop computer with its separate _____, mouse, monitor, and speakers is big, bulky, and awkward to move around.
2. You can't use a brand-new memory module or the latest disk drives with a 10-year-old motherboard because the designs have changed to _____ newer and better processors and other devices.
3. When you want to add more _____, a larger _____, or maybe a second graphics controller and monitor to your system, you can be confident that you won't have to limit yourself to products from a single manufacturer.
4. A desktop case with a _____ keyboard occupies more physical space than a more compact laptop computer.
5. A new CPU can offer faster processing and better performance than the one that was _____ supplied with the computer.

II. Translate the following passages from English into Chinese.

By Wintel computers, we mean computers designed around Intel processors (and similar processors made by AMD), and the Microsoft Windows operating system. However, this is not a “How to Use Windows” book that covers every imaginable feature and function in the Windows operating system——there are other books in the Bible series for that. This book may have been specifically written about using your computer with Windows XP (with Service Pack 2 installed), but readers who run their computers with Linux or Unix and those who have upgraded to Windows Vista can also find a lot of useful information here.

Section C Pros and Cons of Laptop Computers

Laptop computers are compact, lightweight alternatives to full-size desktop machines. Your laptop is a **self-contained** system that can easily fit into a **briefcase** or backpack. When you arrive at your **destination** (or when you want to use the computer along the way), you can open up the clamshell case, turn on the power switch, and start working or playing a game just as soon as Windows completes its startup **routine**.

A laptop computer might be easy to carry around, but that **convenience** comes at a price in ease of use and repair, cost, and security. If you expect to move your computer often, a laptop is the obvious choice. But don't spend the extra money for a laptop until you consider the drawbacks of a portable system.

Laptops are portable.

The whole point of a laptop computer is easy **transport**. If you're a frequent traveler, or if you expect to use a single computer at the office or school and at home, a laptop is far more convenient than a desktop system. A laptop weighs less than a desktop machine with similar performance, and it comes in a smaller package.

Because laptop computers can use **batteries**, you can use them almost anywhere. Combined with a **wireless** Internet link, you can work on your own computer or connect to the rest of the world without the need to find a source of AC power for a few hours.

In addition to the **central processor**, memory, and data storage that are common inside a desktop case, a laptop computer also includes a keyboard, a video display, and a **substitute** for a mouse. Therefore, you don't have to buy those

self-contained ['selfkən'teind]

adj. 设备齐全的, 独立的, 沉默寡言的

briefcase ['brifkeis]

n. (扁平的, 柔韧的, 装文件, 书报的)公文包

destination [ˌdesti'neiʃən]

n. 目的地, [计]目的文件, 目的单元格

routine [ru:'ti:n]

n. 例行公事, 常规, 日常事务, 程序

convenience [kən'vi:njəns]

n. 便利, 方便, 有益, 有用的, 方便的用具、机械、安排等

transport [træns'pɔ:t]

n. 传送器, 运输, 运输机

vt. 传送, 运输, 流放, 放逐

battery ['bætəri]

n. 电池

wireless ['waiəlis]

adj. 无线的

central processor

中央处理器

substitute ['sʌbstɪtju:t]

n. 代用品, 代替者, 替代品

devices separately, and you don't have to connect them to the case before you can start using your computer.

Laptops have design limitations.

If laptop computers were better than desktop machines in every way, nobody would bother with a desktop system. However, the same small size and reduced weight that makes a laptop easy to move around often makes it more difficult to use.

Smaller Screen

The screens on most laptop computers are no more than 15 inches from corner to corner, often as little as 12 or 13 inches. This compares to the most common desktop monitors, whose screens measure anywhere from 17 to 21 inches or more. When a desktop monitor and a laptop screen are set to the same **resolution**, the images on the laptop are always smaller. And the same text on the smaller laptop screen is almost always more difficult to read. A few laptops with larger screens—some more than 20 inches—are available, but they're extremely expensive, and a screen that big makes the whole computer less compact and portable.

resolution [ˌrezəˈljʊːʃən]

n. 坚定, 决心, 决定, 决议

Smaller Keyboard

The size of a laptop computer's keyboard is limited by the width of its case. Except for a unique unfolding butterfly keyboard that IBM tried and **abandoned** in the mid-1990s, a laptop keyboard cannot be any wider than the lower half of the clamshell. Even though laptop keyboards don't include all of those extra keys that appear to the right of the traditional **typewriter** keys on a desktop keyboard, the individual keys on a laptop are often smaller and closer together than those on a separate keyboard.

abandon [əˈbændən]

vt. 放弃, 遗弃

typewriter

打字机

If you're a **touch-typist** who is used to a traditional keyboard, this can have a huge impact on your speed and accuracy. All those typing exercises in high school and all those years of text and data entry have conditioned your fingers to expect to find each letter in the same place on any keyboard. You don't have to think about finding a letter; your brain **automatically** takes your fingers to that key. But when the keys'

touch-typist

手动打字员

automatically [ɔːtəˈmætɪkli]

adv. 自动地, 机械地

locations are slightly different, you either hit the wrong key more often, or you type more slowly in order to direct each **keystroke** to the right location.

keystroke ['ki:stroʊk]

n. (打字机等)键的一击

Laptops are easy to steal.

In an airport, a railway station, or a library, an **unattended** laptop computer can easily disappear within minutes. For all the same reasons that make laptop computers convenient to carry, they are also extremely attractive targets for theft. They're easy to **grab** and hide, and easy to sell to an **unscrupulous** bargain hunter.

unattended [ʌnə'tendɪd]

adj. 没人照顾的, 未被注意的, 无人出席的

Worse, the information stored on a laptop's hard drive can be even more valuable than the machine itself. Business records, **thesis** notes, and other information stored in data files can be difficult or impossible to **reconstruct**.

grab [græb]

v. 抢夺, 攫取, 夺取

unscrupulous [ʌn'skru:pjʊləs]

adj. 肆无忌惮的, 无道德的, 不谨慎的

thesis [θi:sis]

n. 论题, 论文

reconstruct ['ri:kən'strakt]

v. 重建, 改造, 推想

lightweight ['laitweɪt]

n. 轻量级选手, 不能胜任者

combination [kəmbi'neɪʃən]

n. 结合, 联合, 合并, 化合, 化合物

durable ['djʊərəbl]

adj. 持久的, 耐用的

recharge ['ri:tʃɑ:dʒ]

vt. 再充电, 再控告, 再袭击

Laptops are more expensive.

When you buy a laptop computer, you pay something extra for the added convenience of a **lightweight** portable system. The price of a laptop computer is always higher than a desktop system with similar performance. That added cost is a **combination** of more expensive design, non-standard parts, and an expensive battery in every computer. A laptop also has to be more **durable** than a desktop system.

Even though you can **recharge** it when you run the computer on external power, your computer's battery won't last forever. The life of a laptop battery depends on the way you use the computer, but you probably need a new one at least every couple of years.

Laptops need repairs more often.

It's easy to understand why a laptop computer is more likely to need repairs than a desktop machine if you consider the way people treat them. The owner of a laptop grabs it off the desk, drops it into a bag or a briefcase, and throws it over a shoulder or onto a baggage cart. Then it gets shaken around for a couple of hours, until the owner stops into a coffee shop and fires up the computer to check for E-mail. Oops! Was that hot coffee and warm milk you **spilled** into the keyboard? Oh well, use some

spill [spɪl]

vt. 使溢出, 使散落, 洒, 使流出, 使摔下, 倒出

napkins to soak it up and put it back in the bag.

Even if you handle your laptop computer carefully, it may still be exposed to more **hazards** than a desktop system: laptops run hotter, they are turned on and off more often, and they're subjected to more physical **abuse**.

Laptops use proprietary parts.

If a manufacturer controls the market for replacement parts, they can charge whatever they want. A few laptop parts such as memory modules and hard drives are common among more than one manufacturer, but case parts, motherboards, mounting hardware, keyboards, and screens are all **unique** in just about every make and model.

Spare parts are often expensive, but if you stick to well-known brands, they should be easy to find. In order to **identify** the exact part your computer needs, you must consult a service manual, where you probably have to consult an **exploded** parts diagram. Your local computer parts **emporium** probably doesn't keep parts for every popular laptop type in stock, so you have to order the thing directly from the factory.

Laptops are difficult to repair or modify.

It sometimes seems as if the design of laptop computers is based on the Trash Compactor method. That's the one where you lay out all the parts on a big table and then **squeeze** everything down until it all fits into the case. The parts inside a laptop clamshell are tightly stacked and combined in order to fit all the same features and functions that are **available** inside a much larger desktop case.

The parts are smaller and closer together, and they are often held together with teeny tiny **screws** and connectors that are easy to lose. It's often difficult to locate a disconnected cable or a loose screw because there's another component in the way. Without a detailed set of instructions from a service manual or a manufacturer's Web Site, you might not even get the cover open without damaging something.

napkin ['næpkin]

n. 餐巾, 餐巾纸

hazard ['hæzəd]

n. 冒险, 危险, 冒险的事

abuse [ə'bjuz]

n. 滥用, 虐待, 辱骂, 陋习, 弊端

proprietary [prə'praɪətəri]

adj. 所有的, 私人拥有的

unique [ju:'ni:k]

adj. 唯一的, 独特的

identify [ai'dentɪfaɪ]

vt. 识别, 鉴别, 把……和……看成一样

exploded [ɪks'pləʊdɪd]

adj. 爆破了的, 被打破的

emporium [ɪm'pɔ:riəm]

n. 商场, 商业中心, 大百货商店

squeeze [skwi:z]

v. 压榨, 挤, 挤榨

available [ə'veɪləbl]

adj. 可用到的, 可利用的, 有用的, 有空的

screw [skru:]

n. 螺钉, 螺旋, 螺杆

Exercises

Reading the text and talking about how to buy a new computer.

Whether you ultimately decide to buy a desktop computer or a laptop (see Chapter 1 for help making that choice), your strategy for selecting exactly the right machine to fit your particular needs is the same: looking for the best combination of features, quality, performance, support, and price. This chapter tells you how to identify the features and options that your computer should include and how to evaluate the less tangible characteristics that make the difference between a cheap computer and a true bargain.

Cost

As in most retail, computer vendors do charge what the market can take. New features tend to cost more upon their first introduction to the public and decrease in price as the novelty wears off; fancy yet useless designs can also rack up the price a bit. But the largest part of a computer's cost is directly related to its performance and the quality of its components. Because the retail computer business is extremely competitive, computers with similar performance and features almost always have similar prices. A cheaper computer contains slower, cheaper parts. When you buy a new computer, you usually get what you pay for.

Unless you can find a special sale or rebate, it's probably not productive to choose a computer based exclusively on price. It's better to identify the features and options that make a difference to the way you use the machine. Let the performance and features drive your choice.

Quality

Quality in a computer is partially reflected in more durable, more reliable parts. Although it's possible to assemble a computer from premium-quality components, most manufacturers and screwdriver shops use less expensive parts that are still entirely adequate for most users. Most of the components inside your computer can last long after advances to the technology make them obsolete.

The Internet is full of detailed reviews and anecdotal reports about every imaginable piece of computer gear, from fully assembled systems to individual cases, motherboards, and plug-in cards. If a particular item has a history of failure or terrible factory support, you can be sure that a bunch of unhappy people have described their experiences online. A Web search on the make and model name or number plus the word "review" can probably direct you to sites that offer praise or warnings about the piece of equipment you're considering. Don't pay much attention to the glowing reports in the manufacturer's own site or those of their dealers, but look for independent reports, especially the ones in user forums and blogs. Don't worry as much about one or two negative stories among a lot more positives—even the best products get those. If you find a 10-page technical review, look for the subjective evaluations on the first and last pages.

Brand name or white box?

A handful of major computer makers such as Dell, Hewlett-Packard, and Lenovo (formerly IBM) add value to their products with custom software and special design features, but they and the vast majority of other desktop-computer makers use parts and components from the same suppliers. Many smaller companies assemble computers entirely from generic parts that are often equal in quality to the ones used by the big brand-name companies. Their products are often known as white-box computers because the package that surrounds the assembled computer does not always identify the company that put it together.

White-box computers (which are really beige or black more often than not) are assembled from standard cases, motherboards, and other parts by wholesalers and retailers as their house brands, and by Internet and mail-order dealers. They often carry an adhesive label with the assembler's name in an inch-square indentation on

Bus: 在日常用语中表示公共汽车, 但是在科技英语中是总线的意思。

3. 常用派生的名词

专业英语词汇大部分都是用派生法构成的, 即通过对词根加上各种前缀和后缀来构成新词。加前缀构成新词一般只改变词义, 不改变词类。

例如:

词缀	词缀含义	例词
Inter-	between, among	international, interface
Counter-	against	counteract, counterpart
sub-	beneath, less than	subway, submarine
in-		intake, inlet
out-		output, outlet
tele-	far away	telescope
micro-	small	microcomputer
super-	to an unusually high degree	superman, supermarket
- ics	subject	dynamics, statistics
- ist		dentist, artist
- phone	sound	microphone

加后缀构成新词可能改变也可能不改变词义, 但一定会改变词类,

例如:

reality	<i>n.</i> _____	real (<i>a.</i>) + <i>ity</i> ;
discussion	<i>n.</i> _____	discuss (<i>v.</i>) + <i>ion</i> ;
sailor	<i>n.</i> _____	sail (<i>v.</i>) + <i>or</i> .

4. 词性转换多

英语单词有不少是多性词, 即既是名词, 又可作为动词、形容词、介词或副词, 字形无殊, 功能各异, 含义也各不相同, 如不仔细观察, 必定会出错。

例如: light

名词: (启发)in (the)light of 由于, 根据;

(光)high light(s) 强光, 精华; (灯)safety light 安全指示灯。

形容词: (轻)light industry 轻工业;

(明亮)light room 明亮的房间;

(淡)light blue 淡蓝色;

(薄)light coating 薄涂层。

动词: (点燃)light up the lamp 点灯。

副词: (轻快)travel light 轻装旅行;

(容易)light come, light go 来得容易去得快。

诸如此类的词性转换, 在科技英语中十分常见, 几乎每个技术名词都可转换为同义的

台式计算机价格更低廉

当价格成为首要问题时，一台台式计算机则是更好的选择。因为一台台式计算机通常比一台膝上型计算机便宜。即使你在基本的系统之外增加了独立的显示器、键盘和鼠标，整个价格上还是要比同样配置的膝上型计算机便宜。如果你正在寻找价格最低廉的计算机，或者在某一个具体性能要求下相对较便宜的计算机，一台台式计算机是一个不错的选择。

当然，花费比膝上型计算机更多的价钱去购置一个台式计算机，使其具有超快的处理器和图形控制器、超大的内存、大尺寸的液晶显示器，以及其他的高端部件和配置，这不是不可能的，但这不是一个公平的对比。具有相似配置的台式计算机的价格要远远低于膝上型计算机。

如果你要自己来装配计算机的话，可能节省更多。主要计算机制造商，如戴尔和惠普，可能会提供一个非常便宜但功能有限的计算机，这要比你自己装配同样配置的计算机便宜。但是，如果你想要一台更好性能的系统，你经常能容易地找到比现成的产品更便宜的优质的配件。例如，机箱、主板(如图 1.3 所示)、磁盘驱动器、扩展卡，以及其他的台式计算机的标准配件。

因此，对于那些有较多的时间和好的装配技术而现金较少，同时又要求计算机比基本系统具有更高性能的人来说，自己装配计算机是一个更实际的选择。但是由于膝上型计算机没有配件的统一尺寸和布局标准，你在搜寻普通的能够组合在一起的膝上型计算机机箱、键盘、视频设备以及主板时会发现，这并不现实。

台式计算机使用标准配件

在一台台式计算机内部通常有一个或更多的设计标准，因此用一个其他制造商的配件去替换一个损坏的配件通常是可能的。并且当你要为系统增加内存、换一个更大的硬盘驱动器或者一个二代的图形控制杆，再或者一个显示器，你不用担心非要在一个制造商那里购买。如果你的机箱品牌是 Compaq 或者 Gateway，你仍然可以去一些大的机箱零售商那里进行选择一些不同品牌的部件。这种模块化的组合设计和市场竞争使得大多数台式计算机配件比那些相应的非标准的膝上型计算机配件更低廉。

另外，常见的零件规格可以使一个维修商店保持一个小的库存量，因为他们可以将相同规格的零件用于许多不同品牌和型号的台式计算机上。

台式计算机拥有灵活的设计

台式计算机采用模块化系统，使得在满足每位用户的特殊需求时能够容易地增加或替换单个部件。如果一台计算机要求能够画图或带有计算机辅助设计系统，就要配置一个高质量的图形控制器以及显示设备，而一个采购人最多也不过就是使用文字处理软件和报表系统。大多数计算机制造商会让你准确地提出对零件特点和规范的需求。

当你需要改变它时，除非你的计算机使用的是享有专利的部件，否则打开机箱来重新配置系统通常并不是很容易的。你必须确信主板上的插座以及电源的插孔和新的扩展卡或硬盘之间，以及控制其他系统的印制电路板和新的部件之间都是匹配的。

模块化设计也意味着当你扔掉已经废弃的计算机时，你可以将一些旧的配件放到新计算机上。例如，我写这本书时，用的 Northgate 键盘已经用了 15 年，其间更换了一台又一台的计算机。我很喜欢敲打该键盘的感觉。Northgate 公司许多年前已经停止生产这些键盘了(一些类似的键盘仍然可以从其他的制造商那里买到，但价格比较贵)，但是这个键盘的电缆插头仍然能和我目前计算机的插座匹配，而且它与这个 21 世纪生产的处理器和主板匹配得也非常好。

当然，这种灵活的设计也有一些局限。你不能使用一个新品牌的内存或者近期生产的硬盘去匹配 10 年前生产的主板，因为设计者已经要求它们匹配更新的和更好的处理器和其他设备。