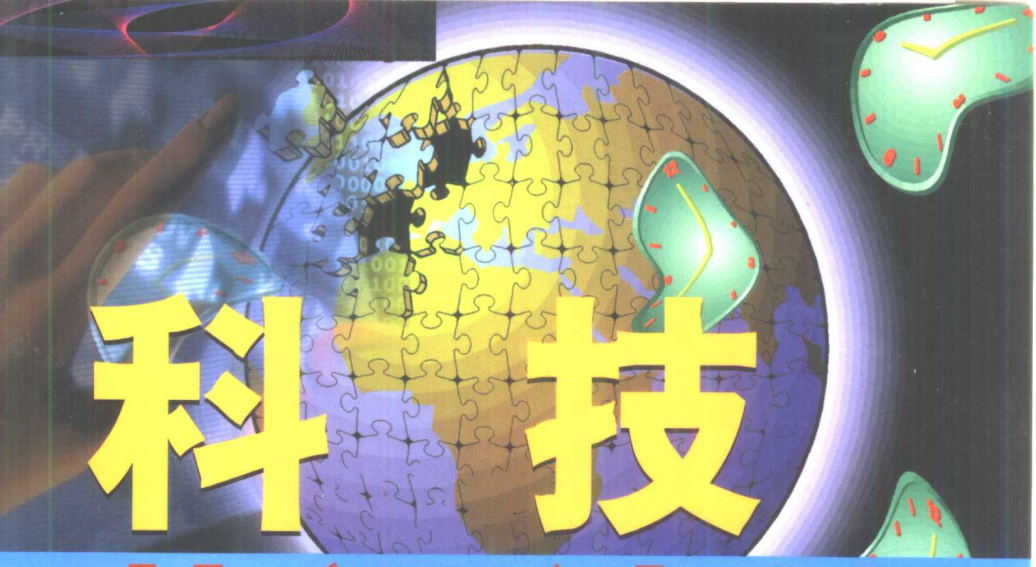

科技英语选读

Network · Communication · Computer

网络·通讯·计算机

主编：孔　飞

外文出版社

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北京市高校研究生英语教学研究会推荐读物

Reading in English for Science and Technology

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主编 孔 飞

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Due to the inconvenience of communication, we are unable to get in touch with the authors of the articles selected in this book.

Please contact the publisher who has reserved the remuneration for them.

前　言

英语作为一门主流国际交流语言，其作用已日显重要。如何学好英语一直是人们关心的热点。近些年来，英语教学界基本认同了语言学习脱离不了文化这样一个道理。通过英语去更多地了解全球信息革命、科技突破、观念迭代、生活方式变更等已成为当今英语爱好者新的渴望和学习动力。

为适应英语学习这一新变化，许多新书已经面市，但是，总的来看，介绍社会生活方面的多，涉猎科技的少；而在科技读本中，内容综合的单本书多，按学科分类的丛书少。为了帮助大学四级以上英语水平的读者扩大知识面并能较系统地把握国外科技新进展，我们通过北京市高校研究生英语教学研究会组织了四所高等院校近二十位教师和专家编写了《科技英语选读》这套丛书。这套系列丛书共四卷，覆盖了十几门学科，如机电、化工、材料、信息、网络、生物技术、环境科学等。选材力求遵循新颖全面、理论与应用并重、旨趣性强三个原则。

1. 新颖全面。

入选文章既要突出学科最新成果和发展方向，又尽可能地反映该学科的全貌。《生物技术·环境科学》包括生物芯片、克隆和转基因动物、DNA 指纹分析等前沿性文章。同时，读者还能读到生物技术简史、人类基因组工程、农业生物技术等从不同侧面勾画生物技术的论述。《制造业·汽车技术》系统介绍机电一体化技术、虚拟制造、机器人等，汽车技术方面则选用了塑料汽车、电动汽车、模拟驾驶系统等文章。《化学与化工·材料·应用物理》让读者了解到纳米技术、航天材料、塑料电源等方面的知识，也较为全面地介绍了激光、超导、核动力等。《网络·通讯·计算机》选取网络安全、电子商务、虚拟现实、多媒体等方面的最新材料，同时还让读者了解到 Java 语言、浏览技

术、Intranet 等信息技术的发展动向。

2. 理论与应用并重。

丛书重点突出技术的实用性。理论性文章少而精，重点突出技术的应用。如 E-mail 的有效使用、网上商务、远程存取办公资料等，都直接面对信息社会的生活需要。在“生物技术”中，除五篇关键性理论介绍外，大部分都是应用方面的文章，如基因疗法、克隆技术、DNA 分析等。“环境科学”则着重介绍资源保护方面的现状和发展。

3. 旨趣性强。

为避免科技读物枯燥晦涩的弊病，丛书坚持了知识性与趣味性并重，所选文章读起来有益并且有趣。“制造业”中不仅选用了介绍机器人的文章，还包括了微观技术、军事侦察、三维动画等有趣的题目。“环境科学”涉及了太空开发动植物、生态旅游、野生动物保护等有趣的题材。《化学与化工·材料·应用物理》则收录了几篇具有探索性的小论文，如《利用 CO_2 制造绿色塑料》、《植物回收重金属》。

由于读者已经具备一定的英语基础，本套丛书的练习便集中在专业词汇释义、难句、概念和背景的注释上。我们希望该套丛书能够帮助广大英语爱好者和科技爱好者更好、更快地阅读英语科技文章并能拓宽知识面，把握科技时代的脉搏，充满信心地迈向二十一世纪。

编　者

此为试读，需要完整PDF请访问：www.ertongbook.com

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Part I

Network

网络

(1—26)

1. A Guide to Downloading from the Internet
网络下载指南

There are thousands of games; utilities①, screensavers②, browser③ **plug-ins**, applications, and upgrades which can be conveniently found in software **archives** on the Web④—many of which are completely free. Downloading this software is simple—almost like copying a computer file or program from a floppy disk⑤ onto your computer's hard drive⑥. Only, instead of using a floppy disk placed in the "A" drive, the file is "copied" to your PC from the Web.

The popular Netscape Navigator and Internet Explorer Web browsers include FIP (File Transfer Protocol)⑦ functions to **facilitate** downloading through the simple click of a mouse. Besides having the ability to download right from the Web with your browser, most Web sites⑧ used for downloading also include detailed descriptions of each file it has available. You simply click on the "download now" button or other **prompt** and the process automatically **executes**.

If you are downloading from the Web and you use Windows, you can either open another instance of your browser and continue surfing around⑨, or open another program and continue working all while the download continues.

Software Categories

The software files you'll find available for downloading to your computer on the Web mostly fall into one of these three types: Demoware—A commercial product the manufacturer has made

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available to those who want to try the program out[10] before they buy it. It usually is accompanied by a timing mechanism[11] that prohibits the program from[12] working after a set amount of time. Some demos will have important features locked out[13] and unavailable for you to use, like the ability to save a file you create with the demo.

Shareware—A fully functional software program the developer places on the Internet for you to download and use to see if you like it. If you find that you do indeed like the program, and you continue to use it past the trial period (usually 30 days) you are **morally** obligated to "buy" it[14]. You purchase the program by submitting the registration fee[15] imposed by the author.

Freeware—A **full-blown** product the author is simply giving away[16].

Downloading Steps

As an illustration of the downloading process, you might choose Microsoft's download site to obtain a copy of its freeware Internet Explorer Web browser. Use your current browser to **access** Microsoft's **IE** site (www. microsoft. com/ie) where you'll find a complete description of the program as well as directions for downloading it. IE has several versions available—so decide which version you' ll need. There are versions available for different computer operating systems, and versions with a variety of **options**.

After you select the version in the drop-down list you're sent to the download area to select a **server** from which the file will be sent to your computer[17]. Pick the server closest to your location. Click on your choice and the process will start. If this site seems busy and is slow to download from, try another.

Your computer will ask you where you want the

downloaded file placed on your disk. You can select to have it stored anywhere on your computer—just remember where you put it. You'll need to know this later on after the download is complete.

It is worth setting up a **folder** (subdirectory) on your hard disk **labeled** "Download" to store any files that you download in one location where you can access them easily.

After you select the place to store the file on your computer, the download begins. While this is going on, you can select to do something else. Some files are quite large and, depending on the speed of your Internet connection, will take some time to complete. Windows tries to estimate the amount of time the process will take and displays the progress in a window on your screen. When the download is complete the progress window will disappear. You're now free to log off[18] and proceed with the installation of IE.

After the file has been transferred to your PC you need to find it and install it. Use Windows Explorer to locate the file in the folder you downloaded it to. Microsoft had made the installation of IE simple—just double-click on the filename to **un-compress** and install the program. Everything is automatic from this point on. Once you complete this installation process you're free to use the program to browse the Web.

Zip Files[19]

If you're going to download files, you need to know about something called file compression. Simply put, file compression is a way of making a file take up a lot less room on a server's disk and keeping those parts in one neat package[20]. It also cuts down on the amount of time it takes to download the program because the program is squeezed to make it more **compact**.

Compressed files cannot work in their compressed form—you first must uncompress the file and expand all the parts into individual files before you can install it. Most programs intended for PC **compatible** computers are compressed by the download site **manager** with a utility called PKZip from PKWare Inc. Mac and Unix operating systems have their own file compression utilities. In order to restore the program to its original, uncompressed form, you need to use PKUnzip. A Zip utility should be one of the first programs you download so that you can work with zipped files[19]. If you use windows 95/3.xx you can also obtain the popular WinZip utility that un-compresses, or "unzips" files with the **.zip extension**.

Using WinZip to Un-compress Zip Files

WinZip is a popularly used shareware utility designed for use with Windows 95/3.xx which un-compresses or "un-zips" downloaded zip files (.zip extension).

WinZip is a self-extracting exe file that will un-compress and install itself when you download it (http://www. winzip. com/) and double-click on the filename. After you download and run WinZip you'll find a new folder on you computer's disk containing the program. An **icon** will also appear on your desktop to launch the program from.

The process for downloading zip files is exactly the same as self-extracting **.exe** files. You place the **.zip** file in your download folder. From there you can work on un-zipping them.

Windows 95 makes working with complex computer tasks easy and using WinZip under Windows 95 is no exception. To begin the extraction process, open the zipped file by clicking on the open button. Choose the folder in which the zipped file is located. Next, choose the filename and WinZip displays the

individual files in the archive along with the date each file was created and the sizes of the files.

You can now choose a individual file to unzip, or several. Usually you'll want to choose all of them by clicking on the first file in the list then pressing and holding down the Shift key on your PC's keyboard and clicking on the last file. The whole list should be highlighted and you can release the shift key. Alternately you can select All files from the extract dialog box.

Next, click on WinZip's extract button. A dialog box will open to allow you to select a folder in which to put the extracted files. You can select an existing folder or create a new one. If you're un-compressing a new program, select to put it into a newly named folder. Click OK and the program unzips the files and places them in the new folder ready for installation.

By the way, you still have the zipped file in your computer in the download folder. You can either delete it after you finish installing the new program or you can keep it archived there in case something goes wrong later.

Be warned that when you download, there are no guarantees that the transmitted files won't infect your computer with a hitchhiking virus[21]. So be prepared and regularly check your PC with an antivirus program (some of these can also be downloaded by the way).

Installing Downloaded Programs

Once you have unzipped a downloaded file into a folder you can install the program so it will run on your computer. Installation begins by examining the program's folder and looking for any special instructions. Click on the folder that contains the newly unzipped file and scan the individual filenames. You're looking for a **read.me**, **readme.txt**, **readme**

.doc . or any other file with a **.txt** or **.doc** extension .

Filenames like these contain instructions for installing and using the program. Open them by clicking on the filename. If the filename has a **.txt** extension, Windows 95 will open the file in Notepad②. If it's a **.doc** file, it will open in Wordpad. Read and follow any instructions for installing the program onto your disk.

Most programs designed to run under Windows 3. xx or Windows 95 come with a program that will automatically install and set up the program for you. To use these installation programs look for a file called **setup. exe** . Simply double clicking on this file will launch the setup program and install the program on your computer along with an icon for your desktop.

Other File Compression Techniques

By far, most downloadable files on the Internet for PC compatible computers will be available in zip compression format. Some files available directly from the developers as "Demos" will be self extracting. In other words, all you need do to uncompress these files is double-click on the name of the file. These files will be in the format filename **.exe** .

Sometimes, such as with files available from Microsoft, double-clicking on the file will uncompress the file and run an installation program automatically. These, by far, will be the easiest for you to work with.

NEW WORDS

access /'ækses/ vt. 进入

archive /'a:kaiv/ n. 资料库，档案

compact /'kɔmpækt/ a. 紧密的，紧凑的

compatible /kəm'pætəbl/ a. 兼容的
demoware /deməwɛə/ n. 示范软件
execute /'eksi:kju:t/ vt. 执行
extension /ik'stenʃən/ n. 扩展名
facilitate /fə'siliteit/ n. 使容易（便利）；简化
folder /'fəuldə/ n. 文件夹，子目录
freeware /'fri:'wɛə/ n. 免费软件
full-blown /'ful'bləun/ a. 成熟的
icon /'aikɔn/ n. 图标
IE：Internet Explorer 的缩写，即 Internet Explorer 浏览器
label /'leibəl/ vt. 标注
manager /'mænidʒə/ n. 管理器
morally /'mɔrəli/ adv. 道义上
option /'ɔpʃən/ n. 选择，选项
plug-in /'plʌgin/ n. 插接
prompt /prɔmpt/ n. 提示
server /'sə:və/ n. 服务器
shareware /'ʃɛə'wɛə/ n. 共享软件
un-compress /ˌʌnkəm'pres/ vt. 解压缩

NOTES

1. utility：实用程序。在信息处理中经常用到一些例行任务的支持程序，它由一组具有通用功能的程序构成，例如编辑程序、连接程序、文件管理程序、操作管理程序等。有很多实用程序是用户根据任务需要而开发的，一个大的系统软件中通常也包含有许多实用程序。与应用程序相比，实用程序通常比较简单，规模也较小。
2. screensaver：屏幕保护程序。①X window 提供的一个屏幕的清空。X window 中有库程序能使屏幕保护程序打开或关闭。当它被打开时，可设置屏幕闲置最大时间，若屏幕闲置超过这个时间，便将其保存并清空。②当一幅画面长时间显示在屏幕上时，可能对屏幕产生永久性浸蚀，使其再显示其他画面时，仍能隐约地看到造成浸蚀的那幅画面的痕迹。为防止此现象发生，可使用屏幕保护程序。当该程序检测到一幅画面在屏幕上显示时间足够长时，就启动运行，使屏幕画面变暗。或显示一组不断移动的画面，使任何画面都不至于对屏幕造成浸

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