

全国优秀畅销书
全国高校出版社优秀畅销书二等奖

An English Reading Course for Modern Science and Technology

现代科技英语 阅读教程

程同春 程 欣 编著

精选 原版文章

反映 科技动态

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全新
修订版



东南大学出版社
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东南大学出版社

• 南京 •

第 9 次印刷出版说明

《现代科技英语阅读教程》自首版以来,已连续印刷出版 8 次,先后被评为“全国优秀畅销书”和全国高校出版社“优秀畅销书二等奖”,受到广大读者的欢迎程度出乎作者和出版社之预料。先后有 30 多所大学将此书作为“科技英语”课程的教材,有的高校甚至要求此教材全校文科、理科学生人手一册,以便让当代大学生既增进对现代科学技术知识与发展动态的掌握与了解,又提高英语阅读理解与英汉翻译的能力与素养,扩大科技英语的专业词汇量,拓展专业知识,以利文、理科学生综合素质的培养。

针对许多高校和广大读者的要求,并为反映当下的科技动态和科技成果,出版社建议对此书进行修订。这次修订的原则是:对原有内容作少量修订,在保留原书特色和长处的基础上,按科技分类作了较大调整,特别是增加了反映最近几年来世界科技发展与研究的新成果、新见解等新内容,如:网络生活、网络技术、机器人、生物燃料、纳米技术、绿色革命、转基因作物等方面的最新发展与研究,以便与时俱进,紧跟上当代科学技术的迅猛发展。

全书根据科技内容的不同,细分为 12 个单元,共 40 篇课文。每篇课文配有汉语译文、注释和多项练习题等。每单元开始的第 1 页上,均安排了 3 段简要英文,对本单元内容进行总述、概念定义、要点解释或者列出重点和主题句。有些单元之间内容不同,但也有着内在关联,属于交叉性学科。教师在课堂教学中,可以有重点地选择各单元中有代表性的课文进行讲授,剩余部分可供学生自学或作为课外阅读材料。具体如何组织教学,本书“前言”中所作的建议可供详阅与参考。

本书由程同春教授和程欣副教授任主编,祝长青、钱煜翔、蒋静、袁柯枫、石蕾、蒋文琪、周静、张玲、蒋南珍、王玉芳和蒋夕葆等老师也参加了编写、翻译、修订和校阅等工作。

本书修订中吸收了最新的科技发展和研究成果,参考了有关文章和资料,在此向有关作者表示诚挚的谢意,也向东南大学出版社责任编辑刘坚博士谨致衷心的感谢。

编者

2013 年春于南京理工大学

前 言

回顾过去一百多年的历史,世界科学技术迅猛发展,人类在极短的时间内超越了蒸汽机时代,现在已进入了航天时代和信息时代。从收音机、电视、雷达、汽车、飞机到火箭、激光、电子计算机、航天飞机和人造地球卫星,各种科技发明、创造如雨后春笋般涌现,在工农业生产建设、社会经济发展、文化教育、生命科学、太空研究等各个方面大大促进了世界文明和现代化进程,使世界变得更加丰富多彩,也从根本上改变了人类的生活方式。

科技英语作为英语语言下属的一门专业学科,是专门用途英语(English for Specific Purposes,简称 ESP)的一种,是将要从事或正在从事科技工作和理工类专业人员所教授或应用的专门用途英语。科技英语作为科技交流的工具和科技信息的载体,以英语语言形式反映世界科学研究和发展的成果、方法和动态,其重要性已经并将随着现代科技的突飞猛进而日趋增强。

为了使高等教育面向 21 世纪,适应现代化社会对理工类专业人才的需求,我们特编写了这本教材。本教材主要编选了国内外近年来有关科技发展的最新资料,选题广泛,内容翔实,从个人计算机、因特网、网络电话到电子商务、网上生活方式;从电子鼻、传播技术、信息技术到信息高速公路、国际空间站;从基因工程、克隆技术、虚拟现实技术到红外摄影机、太空旅游;从生物节奏、环境保护、治理污染到绿色革命、开发新能源,几乎包括了理工类专业的各个领域和各种高新技术。这些文章材料新颖,语言规范,体裁多样,信息量大,实用性强,具有鲜明的时代气息。

本教材的编写原则是:结合语言学习的特点,体现基础英语、专业英语和专业知识的三结合,力求成为一门系统性、指导性、趣味性和可读性较强的课程,有利教学,便于自学。全书中,每单元的课文段落按顺序编号,课文后配有注释和汉译文,以帮助读者理解。每单元课文后的练习题和全书最后部分的五套实践练习题引导读者领会全文重点,掌握一些必要与常用的现代科技英语词汇,并结合进行适量的多项选择、阅读理解和英汉翻译实践,从而提高科技英语的阅读与翻译能力。本书可作为高等学校和高等职业技术学院英语专业和理工类专业高年级学生教学用书,也可供科技工作者和理工类专业人员阅读、学习之用。

本书可供教学 1 学年(两个学期),每周 2 至 4 课时。也可由教师根据课时安排情况和学生所学专业的不同,选用相近、相关专业内容的课文,进行有重点的教学。就如何进行教学,建议如下:

一、预习

这是教学的首要环节。学生应在上课前认真进行预习,借助工具书以及每单元课文后的 Language Points and Chinese Translations,充分理解课文内容,学习专业知识及其英语表达方法。

二、课堂教学

这是教学的主要环节,对学生来说,它起着学习科技英语主渠道的作用。课堂教学原则上应用英语讲授,也可适当运用汉语,进行英汉两种语言的比较。课堂教学中可以开展如下教学活动:

1. 让学生朗读课文,将课文翻译成汉语,根据课文内容提问等方式检查学生的预习情况与理解能力。

2. 教师介绍必要的背景知识,讲解一些语言点、重点和难点,以及一些常用的现代科技英语词汇、短语、句型等,同时对一些较难较复杂的句子结构进行必要的语法分析。总之,要调动一切教学手段帮助学生充分理解和掌握课文。

3. 在学生掌握课文内容的前提下,有时可组织课堂讨论或分成小组进行活动,就课文内容结合实际各抒己见,相互交流,以提高学生综合理解能力。

4. 课文后的练习题可作为课堂练习,也可作为课外作业,以帮助学生巩固、提高所学的知识。

5. 在教学过程中,教师也可以根据教学内容和学生英语水平的实际情况,进行一些必要的科技英语阅读与翻译技巧的讲解,以提高学生的科技英语实际应用能力,为所学的专业服务。

三、复习

学生应在教师的指导下进行课后复习。复习时,学生要对课文内容有正确的理解;能将课文译成较通顺的中文;能较熟练地说出和应用科技英语的一些常用词汇;掌握与课文内容相关的专业知识;能正确地做课后的各种练习。

程欣同志参与了本书的编写,并为整理文稿做了大量工作。本书编写中吸收了最新的科技研究成果,参考和引用了有关论著、文章,文中不能一一注明,在此向有关作者表示感谢。书中不妥之处,敬请同行专家、广大读者不吝指正。

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于南京理工大学

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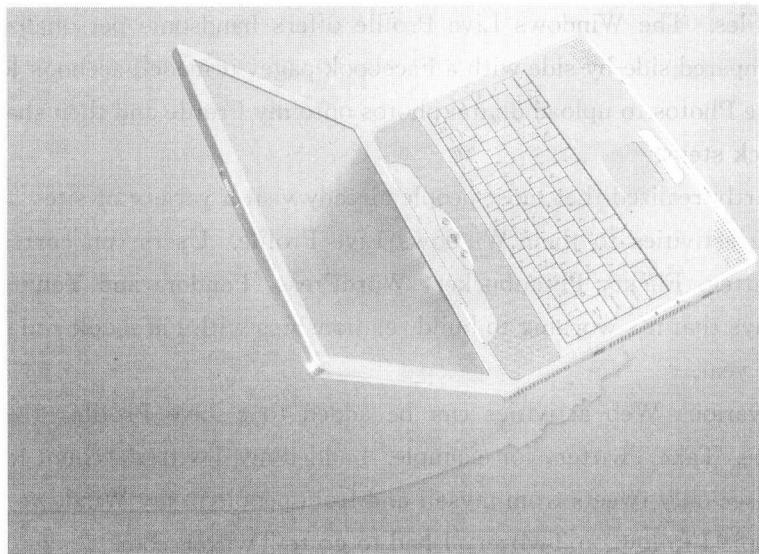
Unit 1 Web Life Today

第 1 单元 今天的网络生活

—— *Web technology has generated immense new wealth and transformed the ways we work, learn, and amuse ourselves.*

—— *Microsoft had a first-rate browser, which it included free with its Windows operating system. This one-two punch destroyed Netscape, and led to antitrust lawsuits against Microsoft in the United States and Europe. But Web access became a global way of life.*

—— *Still, Windows Live Web services and Essentials provide solid tools that can help you organize your email, messaging, photos, storage, scheduling and social networking in one place with one password.*



Lesson 1

Diversifying Your Web Life in One Place

[1] If you use the Internet regularly, your activities are likely spread out all over the Web. You might be sharing photos on Flickr, emailing via Hotmail, posting status updates on Facebook, following tweets on Twitter, sending instant messages on Google Chat and keeping a calendar on Apple's MobileMe. You hop from one site to the next, juggling different user names and passwords.

[2] In Nov. , 2008, Microsoft unveiled Windows Live, its Web-based attempt to consolidate many of these activities. Windows Live can be found at home.live.com and includes programs that cover a lot of ground: Hotmail (email), SkyDrive (online storage), Spaces (blogging), Calendar and Events (online invitations). Four new Windows Live categories—Profile, People, Photos and Groups—create a Facebook/MySpace-like feel by following activities of networked users and sharing that data with others.

[3] If you're using a Windows PC, you can additionally download a suite of seven free desktop applications called Windows Live Essentials from download.live.com that enhance and coordinate with the Windows Live services. These include Messenger, Photo Gallery, Mail, Writer, Movie Maker Beta, Family Safety and Toolbar. I downloaded the Essentials and enjoyed using many of them, especially Mail, Messenger and Toolbal. But I focused my testing this week on the Windows Live Web services, which, as advertised, let me control various elements of my digital life in one place with one password. SkyDrive is a simple and approachable online-storage repository that will be truly useful for a lot of folks who want a central place to keep files. The Windows Live Profile offers handsome personalized pages with bright colors and designs; compared side-by-side with a Facebook page, it made Facebook look dull and sparse. I also used Windows Live Photos to upload digital photos onto my Profile and then shared them with friends and family in three quick steps.

[4] Microsoft smartly realized that most people already visit a variety of sites for online pursuits and will want to add those activities to their Windows Live Profile. Users can currently link to 12 other sources, including Twitter, Flickr, Photobucket, WordPress, Pandora and Yelp—but not Facebook or MySpace. Microsoft says that it's working to build relationships with Facebook and MySpace and hopes to have related news next year.

[5] But though various Web activities can be added to a Live Profile, this connection isn't as productive as it could be. Take Twitter, for example. I added my Twitter account to my Live Profile, but on Live Profile I could see only tweets from myself and from people in my Windows Live network. To see tweets from the 50 people I follow on Twitter, I had to go to Twitter.com.

[6] I had a similar experience with Pandora. I added my Pandora account to my Live Profile, and when I book-marked Keith Urban as a favorite artist, this tidbit appeared on my Live Profile page. But when I listened to Christmas tunes for a few hours, nothing on my Profile page reflected this.

[7] After linking my Live Profile to my Flickr account, I posted photos on Flickr.com, and seconds later, these pics appeared on my Live Profile. But other activities from Flickr weren't reflected on my Live Profile, such as when my contacts posted photos or when those in a Flickr group of which I'm a member posted photos. To see this, I had to visit Flickr.com.

[8] Microsoft says that in the case of Web activities, the outside companies choose what to show and what not to show. But I can't use Windows Live as a home base for my other online activities unless it displays useful data that save me trips to other Web sites. Link many social-networking services, Windows Live gives special privileges to those who are in the network. To belong to a Windows Live network, one must first have a Windows Live ID, which anyone can get by signing up for Hotmail, Windows Live Messenger or Xbox Live.

[9] Windows Live also allows interaction with people outside the network. For instance, I can share any of the photos that I upload to my profile with friends and family who don't have Windows Live IDs by simply emailing a link to them. These people don't need a Windows Live ID to look at the photos. When I used Windows Live to share photos with my sister, who had received hundreds of digital shots from me on every photo-sharing Web site I've tested, she wasn't impressed. She correctly pointed out that other sharing sites, like Shutterfly, allow full-screen slideshow views; Windows Live limits slide shows to the size of the browser window. Windows Live Web service works best on Microsoft's own Internet Explorer browser, version 6 and up, and a special quick-photo-upload tool works only with Internet Explorer. This uploading tool doesn't work with Apple's Safari browser or the Mozilla Firefox browser; instead, you must slowly add each photo to your page, selecting them one at a time.

[10] If you're using a Windows PC, the Windows Live Essentials are definitely worth installing. Photo Gallery enables simple photo publishing directly from your computer's collection of My Pictures, and specific faces can be labeled and tagged in each shot. Windows Live Mail, which replaced Outlook Express last year, is a smoothly designed program that I rely on every day for use with three different email accounts. Windows Live Messenger links into the Live Web services specifically by retrieving the status updates for each person in your network and displaying those in a ticket-like panel at the bottom of Messenger. The Windows Live Toobal works only in Internet Explorer but shows an at-a-glance view of your network's updates, along with photos, email and calendar—all in the top panel of the browser.

[11] Windows Live Essentials are still in beta, or testing, mode, and Windows Live Web services will add more partnerships next month. I'll be anxious to see if these new partnerships operate more productively with the Live Profile. Aggregating content from across the Web isn't worthwhile unless that content is fully and usefully accessible in its new home.

[12] Still, Windows Live Web services and Essentials provide solid tools that can help you organize your email, messaging, photos, storage, scheduling and social networking in one place with one password. That, by itself, is a relief.

Language Points and Chinese Translations

第 1 课 单一界面,多彩网络生活

[1] 你如果经常使用因特网,则你的上网活动很可能遍及整个网络。你可能会在 Flickr 上共享照片,通过 Hotmail 收发电子邮件,在 Facebook 上更新个人资料,在 Twitter 上搜索短消息,在 Google Chat 上与别人聊天,在苹果公司的 MobileMe 上安排日程。你从一个网站跳到另一个网站,变换着使用不同的用户名和密码。

[2] 2008 年 11 月,微软公司推出了视窗在线服务,试图以网络为基础整合多种网上活动。视窗在线可以在 home.live.com 网站找到,其程序包括很多基础功能:Hotmail(电子邮件)、SkyDrive(在线存储)、Spaces(博客)以及 Calendar and Events(在线邀请)。四项新的视窗在线功能——个人档案、人际交往、照片和群——创建了与

Facebook 或者 MySpace 相类似的功能,即可以跟踪网络用户的各种活动,并与别人分享数据。

[3] online-storage repository 硬盘,在线存储硬盘,意指 hard drive

你如果正在使用个人电脑视窗操作系统,就能从 download.live.com 另外下载一套名叫“视窗在线必需品”的软件。该软件免费提供七种电脑应用程序,用来增强和协调视窗在线服务。这些应用程序包括即时消息、相册、邮件、写手、电影制作测试板、家庭安全和工具栏。我下载了这套软件,乐于使用其中的许多应用程序,特别是邮件、即时消息和工具栏。但是我本周的测试重点是视窗在线网络服务,正像广告宣传的那样,它能让我在同一个界面用同一个密码控制我各种各样的电子数码生活。SkyDrive 是一个使用简便的在线存储硬盘,对许多人希望拥有一个存储中心保存各种文档确实很有用。视窗在线档案提供的页面精美,富有个性,色彩鲜艳,设计生动;如果与 Facebook 页面互相对比,则 Facebook 的页面就显得单调松散。我也使用过视窗在线相册把数码照片上传到我的“在线档案”里,然后用三个快捷的步骤就能与朋友和家人共享这些照片。

[4] 微软公司敏锐地意识到,大多数人为了在线搜索而访问各种网站,同时也希望把那些上网活动添加到视窗在线档案。目前,用户们可以链接使用 12 个网络资源,包括 Twitter、Flickr、Photobucket、WordPress、Pandora 和 Yelp——但是 Facebook 和 MySpace 除外。微软公司声称正在运作与 Facebook 和 MySpace 两家机构建立业务关系,并希望在明年有所进展。

[5] 然而,虽然可以把各种各样上网活动添加到在线档案,但是这种链接并不是十分完美。就以 Twitter 为例,我把 Twitter 网站的账号添加到我的在线档案,却只能看到我自己和视窗在线好友发送的短消息。要看到在 Twitter 上所搜索到的 50 个人的信息,我还必须登录 Twitter.com。

[6] 我使用 Pandora 也有过相似的经历。我把自己的 Pandora 账号加入在线档案,当我把最喜爱的艺术家凯斯·厄尔本加入收藏夹后,在线档案页面上就出现了相关的珍闻。但是我听了几个小时的圣诞曲调后,我的在线档案页面上有关此项的信息就一无所有了。

[7] 我把自己的 Flickr 账号输入在线档案后,在 Flickr.com 上传送了几张照片,数秒钟后,这些照片就出现在了在线档案上。但是,Flickr 上其他一些活动并不能在我的在线档案上显示出来,例如我所联系的人或 Flickr 群上的那些成员发送的照片。真要想看到的话,我必须登录 Flickr.com。

[8] 微软公司声称,对于一些相关的网络活动,其他一些网站可以选择显示什么,不显示什么。然而,我现在还不能把视窗在线用作我参与其他在线活动的基础平台,除非视窗在线能显示有用的数据以使我不必再去登录其他网站。像许多网络社交服务一样,视窗在线使同一网络的用户拥有一些特权。要想加入视窗在线网络者首先要有一个视窗在线的用户名,该用户名只要在 Hotmail、Windows Live Messenger 或者 Xbox Live 签名登记,任何人都可获取。

[9] 视窗在线也能使我与本网络外的人进行互动交流。例如,我能够与朋友和家人共享我上传到“个人档案”的任何照片,尽管他们没有视窗在线的用户名,我只要把相关链接以电子邮件发送给他们即可,即他们不必有视窗在线用户名照样能看到这些照片。我测试过一些照片共享网站。当我使用视窗在线与我的妹妹共享照片时,她收到了我发出的数以百计的数码照片,但她印象不深。她指出其他一些照片共享网站,像 Shutterfly 可以允许全屏的幻灯片播放,而视窗在线只限于在浏览器边框内显示。视窗在线网络服务在微软公司的 IE6 及以上版本的浏览器中运作效果最好,其独特的照片快速上传功能仅适用于 IE 操作系统。这种上传功能不适用于苹果公司的 Safari 或 Mozilla Firefox 浏览器;你必须一次一张地慢慢地将每张照片添加到页面。

[10] 你如果是个人电脑视窗用户,那么视窗在线必需品就肯定值得安装。相册能让你把电脑里“我的图片”文件夹中的照片直接发布到网上去,同时能把每张照片中的特定面容进行标记加注。视窗在线邮箱已经替代了去年的 Outlook Express,是一个设计绝妙的程序软件,我每天用它收发三个不同邮箱账号里的电子邮件。Windows Live Messenger 链接进视窗在线网络服务,可以把你网络上每个人的即时更新信息显示在 Messenger 底部的标签状面板上。视窗在线工具栏只能在 IE 操作系统中运作但却可以一目了然地显示出你的网络更新信息,以及照片、电子邮件和日程表——它们都位于浏览器上部的控制面板上。

[11] 视窗在线必需品现在仍处于尚不完善或测试模式,而视窗在线网络服务将在下个月增加更多的合作伙伴。我渴望看到这些新的合作关系能在“在线档案”运作得更有效能。要把网络上各种纵横交叉的内容整合到一起并不合算,除非确保这些内容能够完整、实用地进入新的主页。

[12] 而且,视窗在线网络服务和视窗在线必需品所提供的软件功能强大,能够帮助你在同一个界面用同一个密码构建网络生活;进行电子邮件收发、即时聊天、照片共享、在线存储、日程安排和网上社交活动。仅此就足以慰藉。

Exercises

I. Answer the following questions:

1. Why are your activities likely spread out all over the Web if you often use the Internet?

2. What did Microsoft unveil in Nov. , 2008? And Why?

3. What programs does Windows Live include?

4. What applications do Windows Live Essentials include?

5. Why is SkyDrive very useful?

6. What does Windows Live Profile offer? How about Windows Live Photos?

7. How Many sources can users at present link to via Windows Live Profile? Please list some of them.

8. How does Windows Live allow us to interact with people outside the network?

9. Why are Windows Live Essentials worth installing?

10. Why is Windows Live Toolbar very useful when working in Internet Explorer?

11. What are the functions of Windows Live Web services and Essentials?

II. Translate the following words and phrases:

A. From Chinese into English.

1. 用户名和密码 _____
2. 个人电脑视窗 _____
3. 增强和协调视窗在线服务 _____
4. 在线存储硬盘 _____
5. 在线搜索 _____
6. 珍闻,珍品 _____
7. 网络社交服务 _____
8. 与某人共享照片 _____
9. 全屏幻灯片播放 _____
10. 照片快速上传 _____

B. From English into Chinese.

1. to spread out all over the Web _____
2. to send instant messages on Google Chat _____
3. to consolidate a lot of activities _____

4. to share data with others _____
5. digital life in one place _____
6. to build relationships with... _____
7. to have a similar experience with... _____
8. special privileges _____
9. to email a link to sb. _____
10. to show an at-a-glance view of sth. _____

III. Translate the following passage into Chinese:

Today the center of gravity in technology has shifted from PCs to the Internet, altering the old rules of competition that were so lucratively mastered by Microsoft.

For millions of users, mobile devices like cellphones are beginning to edge out PCs as the tool of choice for many computing tasks. And Google, the front-runner in the current wave of Internet computing, has wrested the mantle of high-tech leadership from Microsoft.

Although Mr. Gates will spend one day a week at the company, it will be up to his successors, led by Steven A. Ballmer, the chief executive, to master the challenges of the Internet or watch Microsoft's wealth and stature in the industry steadily erode. "Bill's legacy is Windows and Office, and that will be a rich franchise for years to come, but it's not the future," said David B. Yoffie, a professor at the Harvard Business School.

Still, the Gates legacy is impressive. In addition to the software itself, Mr. Gates and his company have fundamentally shaped how people think about competition in many industries where technology plays a central role. Today, there are more than one billion copies of the Windows operating system on PCs around the world.

Industry experts and economists say that Windows is not necessarily the best or most admired software for running the basic operations of a personal computer—Apple's Macintosh can claim the most devout fan club. But Mr. Gates grasped and deployed two related concepts on a scale no one ever had in the past: the power of network effects and the value of establishing a technology platform.

Put simply, the network effect describes a phenomenon in which the value of a product goes up as more people use it. E-mail messaging and telephones are classic examples. A technology platform is a set of tools or services that others can use to build their own products or services. The more people who use the tools, the more popular the platform can become.

Mr. Gates took advantage of both notions and combined them to build Microsoft's dominance in PCs, spreading its influence with computer makers and software developers. Today, there are many thousands of software applications that run on the Windows platform, not just word processing and spreadsheets but also the specialized programs in doctors' offices, factory floors and retail stores—a very broad network on a nearly ubiquitous technology platform.

"Gates saw software as a separate market from hardware before anyone else, but his great insight was recognizing the power of the network effects surrounding the software," said Michael A. Cusumano, a professor at the Massachusetts Institute of Technology's Sloan School of Management.

Well-known Sayings

- △ *Take time before time takes you.*
- △ *He who hunts for flowers will find flowers; and he who loves weeds will find weeds.*
- △ *The greatness of art is not to find what is common but what is unique.*

Lesson 2

WWW—Woven Deep into Our Lives

[1] It was a technical paper with the simple title “Information Management: A Proposal”, written by a researcher at a European physics laboratory and filled with esoteric terms like hypertext and browser.

[2] It was also the birth certificate of the World Wide Web, a technology that’s generated immense new wealth and transformed the ways we work, learn, and amuse ourselves.

[3] Twenty years ago this month, Tim Berners-Lee, then a researcher at Conseil Européen pour la Recherche Nucléaire, or CERN, in Switzerland, handed in his proposal for a new kind of computer network. That paper and the technology it envisioned would spawn such giant enterprises as Google, Facebook, MySpace, Yahoo, Amazon, and eBay. At the same time, the Web “has replaced countless other services and resources,” said Ted Schadler, an Internet analyst at Forrester Research in Cambridge. Newspaper circulation dwindled as readers turned to the Web instead; travel agents shut down as tourists book their trips online. And millions of us started to watch our favorite shows on computer instead of TV sets.

[4] Berners-Lee, now based at the Massachusetts Institute of Technology, oversees W3C, the global organization that maintains the Web’s technical standards. Instead of patenting his 1989 brainstorm, Berners-Lee insisted the idea must be given away at no charge, or few people would use it. “It took 18 months for my colleague Robert Cailliau and me to persuade the CERN directors not to charge royalties for use of the Web,” said Berners-Lee in a speech last year. “Had we failed, the Web would not be here today.”

[5] The World Wide Web giveaway spawned an entrepreneurial frenzy as companies sought new ways to profit from Berners-Lee’s generosity. But nobody could make money on the Web until people began to use it.

[6] Berners-Lee built his first primitive browser in late 1990. It was entirely text-based, with none of the pretty pictures you find on the Web today, and you had to type commands to move from page to page. But it caught the attention of two University of Illinois students, Marc Andreessen and Eric Bina, who created a new browser that could show photos and could be controlled by clicking a mouse. Mosaic was the first browser to be widely used.

[7] When computer entrepreneur Jim Clark saw Mosaic, “it dawned on me, this was going to be massive,” he said. So in 1994, Clark and Andreessen formed Netscape Communications Corp. “There were a lot of people who thought I was absolutely nuts,” said Clark. “The Internet is free. How was I going to make any money out of this business?”

[8] Clark found he could sell Netscape browsers to businesses even as he gave them away to the general public. He built Netscape with the ability to encrypt financial transactions and helped create the market for online retailers like eBay and Amazon.

[9] In 1995, Clark sold stock in Netscape to the public. It was one of the most successful stock offerings ever, raising \$2 billion almost overnight.

[10] It was also the last straw for software giant Microsoft, which declared war on upstart Netscape.

Benjamin Slivka, a codeveloper of Microsoft's rival Internet Explorer browser, remembers a desperate effort to catch up. "I and the rest of the team worked pretty insane hours," Slivka said—as much as 100 hours a week for 17 months.

[11] By 1996, Microsoft had a first-rate browser, which it included free with its Windows operating system. This one-two punch destroyed Netscape, and led to antitrust lawsuits against Microsoft in the United States and Europe. But Web access became a global way of life.

[12] People used Web publishing tools to celebrate their hobbies and passions online, using personal websites or quickly updated personal newsletters known as blogs. In 2001, a website called Wikipedia began an encyclopedia composed entirely by volunteers, and today, Wikipedia boasts 10 million articles written in 260 languages by 75,000 unpaid contributors.

[13] Of all the uses to which the Web was put, "the incredible willingness of people, to share the information they have" was a huge surprise to Vint Cerf, chief Internet evangelist at Google Inc. and coinventor of the Internet's core data protocols. "I hadn't anticipated that there would be such a huge response."

[14] Cerf also noted the social power of the Web, which lets people seek out others who share their tastes. "With the World Wide Web and search engines," said Cerf, "you had ways of finding people who had common interests, without knowing who they are." That insight has spawned sites like Facebook and MySpace where it's easy to interact online with likeminded people.

[15] The Web keeps changing the world, with help from wireless data networks and cheap handheld Internet devices. Netscape cofounder Jim Clark is an investor in Clearwire Corp., which is building a network to deliver high-speed data to handheld devices. Google's Cerf said the idea is to expand Web services into poorer countries where people can afford a phone but not a full-fledged computer.

[16] Other innovators are making the Web smarter, with software to help Web computers "understand" data. Mathematician Stephen Wolfram recently disclosed plans for a new website, Wolfram Alpha, that will answer questions typed in ordinary English. Ask Google "what was the Beatles' biggest hit?" and you get 2.3 million Web pages written by Beatles fans. If Alpha works as advertised, it will simply respond, "Hey Jude."

[17] Tim Berners-Lee, notorious for being press-shy, turned down requests for an interview. But today, he will be at CERN, celebrating his own biggest hit.

Language Points and Chinese Translations

第2课 万维网——深深融入我们的生活

[1] WWW 是 World Wide Web 的缩写,万维网,环球网。具体来说,WWW 是一个基于超文本方式的信息检索服务工具,可以提供丰富的文本和图形、音频、视频等多媒体信息,并将这些内容集合在一起,也提供导航功能,使用户可以方便地在各个页面之间进行浏览。由于 WWW 内容丰富,浏览方便快捷,目前已成为互联网最重要的服务。

《信息管理:一份建议书》是一篇题目简单的科技论文,作者是欧洲物理实验室的一位研究人员,该论文中充满了诸如超文本和浏览器这类深奥难懂的术语。

[2] 该论文也是万维网的出生证明书。这一技术,已创造了巨大的新型财富,并且深刻影响工作、学习和娱乐,改变了我们的生活方式。

[3] 20年前的这个月,当时在瑞士的欧洲粒子物理研究所(CERN)担任研究员的蒂姆·伯纳斯·李提交了一份创建一种新型计算机网络的建议书。该建议书与其中所设想的技术将会催生出像 Google、Facebook、MySpace、Yahoo、Amazon 和 eBay 这样的许多巨头企业。同时,万维网“已经替代了其他无数的服务和资源”,剑桥大学福瑞斯研究所的因特网分析师特德·谢德勒说。随着读者转向互联网,报纸发行量逐步缩减;随着旅游者在线预订行程,旅行社纷纷关闭。我们之中的数百万人开始通过电脑而不是电视机观看自己所喜爱的节目。

[4] W3C 万维网联盟,又称 W3C 理事会,是 World Wide Web Consortium 的缩写。W3C 于 1994 年 10 月在麻省理工学院计算机科学实验室成立,建立者是万维网的发明者蒂姆·伯纳斯·李。万维网联盟是国际著名的标准化组织,自成立以来,已发布近百项相关万维网的标准,对万维网的发展作出了杰出的贡献/to patent 取得(发明物或方法)之专利权/brainstorm 绝妙的主意,突然想到的好方法,灵感/to give away 分发,分送,让别人获取/royalty 专利使用费,特许使用费,专利权税,版税

现在任职于麻省理工学院的伯纳斯·李监管着万维网联盟。这是一个全球性组织机构,专门维护万维网的技术标准。伯纳斯·李并没有为其 1989 年的奇思妙想申请专利权,而是坚持认为其创意必须让所有人免费分享,否则几乎就不会有人去使用它。“我和同事罗伯特·卡里奥用了 18 个月说服 CERN 的管理者不要征收万维网的专利使用费,”伯纳斯·李在去年的演讲中说。“如果我们失败了,今天这里就不会有万维网了。”

[5] giveaway *n.* 赠品,免费样品

当许多公司探求新的途径从伯纳斯·李的慷慨中获取利益时,万维网的免费大餐激发了一场创业热潮。然而只有当人们开始使用网络,才能从中赚钱。

[6] 1990 年末,伯纳斯·李研制出了他的第一个原始浏览器。它完全基于文本,没有你今天可在网上找到的漂亮图片,并且你必须输入指令才能从一个页面转到另一个页面。但是这引起了伊利诺斯大学的两位学生马克·安德里森和埃里克·比纳的关注,他们研发出一种新型的浏览器,能够显示图片,并能够通过点击鼠标进行操作。Mosaic 成为第一个被广泛使用的浏览器。

[7] 计算机企业家吉姆·克拉克见到 Mosaic 浏览器时说:“我开始感悟到它将有巨大的发展前景。”因此,在 1994 年,克拉克和安德里森组建了网景通讯公司。克拉克说,“当时有很多人认为我一定是发疯了。因特网是免费的,我怎么能从中赚到钱呢?”

[8] 克拉克发现即使让公众免费使用网景公司的浏览器,但仍然可以将其出售给一些企业。他研制了能够为金融交易编制密码的网景浏览器,并且帮助诸如 eBay 和 Amazon 这样的在线零售商开拓市场。

[9] 1995 年,克拉克向公众出售了网景公司的股票。这是空前的最成功的股票之一,几乎在一夜之间就融资了 20 亿美元。

[10] the last straw (一系列重压,打击中)终于使人不能忍受的最后一击,终于使人不支而倒下的因素/upstart 崛起者,暴发户

这也是令软件巨头微软公司无法忍受的打击,微软公司继而对崛起者网景公司宣战。微软公司与之竞争的 Internet Explorer 浏览器的合作研发人本杰明·斯利夫卡回忆起他们为了迎头赶上而孤注一掷的努力时说:“我和团队的其他成员疯狂地长时间工作。”——一连 17 个月每星期工作长达 100 小时。

[11] 到 1996 年,微软公司已经有了第一流的浏览器,并将其包含在免费提供的视窗操作系统中。这合二为一的重拳组合击垮了网景公司,从而引发了美国和欧洲对微软公司的反垄断诉讼。但是使用万维网已成为了一种全球性的生活方式。

[12] 通过使用个人网站或快速更新被称作博客的个人资讯等万维网发布工具,人们可以在网上谈论自己的爱好,抒发自己的激情。2001 年,一家称为“维基百科”的网站开始创建了一部完全由志愿者编写的百科全书。至今,“维基百科”宣称已经拥有 75 000 位免费撰稿人使用 260 种语言编写的 1 000 万篇文章。

[13] 在万维网的所有应用中,“人们分享其信息的意愿令人难以置信。”这使文特·瑟夫感到非常意外,他是 Google 公司主要的因特网使用宣传者和因特网核心数据协议合作发明人。他说:“我没有预料到会有如此巨大的反响。”

[14] 瑟夫也注意到了万维网的社交威力,它可以让人们寻找到与其趣味相投的人。他说:“使用万维网和搜索引擎,你就会有方法找到有共同兴趣爱好的人而不必知道他们是谁。”这一洞察已经催生出诸如 Facebook 和 MySpace 这样的网站,在这些网站上可以非常容易地与志趣相投者在线互动。