高等学校21世纪计算机教材

计算机专业英语

王国超　王玉律　任煜昌　编著

Computer Specialized English

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内 容 简 介

本书所选内容覆盖计算机科学的主要课题，包括系统结构、硬件组成、软件组成、程序设计、数据库、计算机网络、多媒体等热门课题。

本书课题共分为七个单元，每一单元又由若干篇课文所组成，这些课文均选用最新的计算机科学热门课题相关的文章，选材新颖，注重实用性。并对于 Text 和 Reading Materials 里的重点词和生词都给予了解释。每单元最后还对重要语法及句式均做了透彻的讲解，考虑到不同读者的需要，在本书后还给出了 Text 的全文翻译以供参考。

本书中计算机专业知识和英语知识并重，力求做到通俗易懂、易学易用，既可作为高等学校计算机相关专业的教材，也可供广大计算机爱好者参考使用。

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前　言

一、关于本书

IT（信息技术）的高速发展使得我们的地球越来越小，作为新千年的地球村里的年轻居民，要活得精彩，就必须掌握两种基本技能：计算机和英语。只有掌握计算机，才不会在IT时代被淘汰；只有掌握英语，才可以与世界沟通！

这种环境下，学习计算机英语就显得尤为重要。

本书作者在策划该书时曾经为计算机和英语应该以谁为主线产生过激烈的讨论，后来经过仔细的分析，发觉如果以英语为主线，所谈及的计算机知识会变得很松散，不适合阅读，因此最后决定参考英美计算机科学导论书籍的写法，系统的介绍计算机科学。但与英美计算机科学导论教材一个很大的区别是，力求使本书通俗易懂，易学易用。本书的目标是：本书的读者学习完本书后，不但对计算机科学有一个总体的认识，而且能掌握英语计算机文献阅读的技巧、计算机专用词汇，从而为以后IT知识的学习打下坚实的基础。

二、本书结构

本书共分7个单元，具体内容结构安排如下：

第1单元：计算机的发展。主要介绍了计算机的过去、现在和未来。

第2单元：计算机硬件。主要介绍了系统总览、CPU、内存、I/O系统、总线等知识。

第3单元：计算机软件。主要介绍了软件的基础知识、系统软件和应用软件等。

第4单元：程序设计语言。主要介绍了程序设计语言简史、C时代、C++盛世、JAVA的崛起、第四代语言等。

第5单元：数据库与数据仓库。主要介绍了数据库基础、关系数据库、SQL、数据仓库等。

第6单元：计算机网络。主要介绍了网络奇迹、ISO/OSI、TCP/IP、LAN、Internet、电子商务、网络安全、远程教育等。

第7单元：多媒体。主要介绍了多媒体基础、数字声音、数字图像、多媒体存储等。

三、本书特点

本书内容丰富、实用性强，使读者通过计算机英语的学习，既掌握一定的计算机专业术语，又能提高英语的说、读、写、译的能力，从而能更好地适应信息社会对计算机人才的要求。

四、本书适用对象

本书适用面广，既可作为高等学校计算机相关专业的教材，也可供广大计算机爱好者参考使用。

本书部分材料来自互联网，并参考一些国内外计算机科学方面的著作，在此向原作者表示感谢！

由于作者水平有限，书中难免存在疏漏之处，我们真诚希望读者批评指正。

我们的联系方式：proenglishforcomputers@yahoo.com.cn。

欢迎广大读者和专家对我们的工作提出宝贵建议，联系方法如下：

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本书电子教案、参考答案、总练习及学习计算机专业英语的方法可在本网站免费下载，此外，该网站还有一些其他相关书籍的介绍，可以方便读者选购参考。

编　者

2005 年 6 月

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Unit 1 The Development of Computer

Text 1 The History of Computer's Development

The abacus, a simple counting aid, may have been invented in Babylonia (now Iraq) in the fourth century B.C(There is another saying that the abacus was invented by Chinese 5000 years ago.). Babylonian mathematician also developed algorithms to resolve numerical problems.

The Antikythera mechanism dated back to the first century B.C is a kind of tool used for registering and predicting the motion of the stars and planets.

In the eighth and ninth centuries A.D, Arabic numerals were introduced to Europe. The Arabic system introduced the concepts of the zero and fixed places for tens, hundreds, thousands, etc. It greatly simplified mathematical calculations. The Arabic system is thought to be one of the greatest inventions in the history of human being due to its great contribution to the civilization.

John Napier, invented logs in 1614. Logs allow multiplication and division to be reduced to addition and subtraction. Many computer systems nowadays still reduce multiplication and division to addtion and subtraction in this way.

Wilhelm Schickard a professor at the University of Tubingen, Germany built the first mechanical calculator in 1623. It works with six digits, carrying digits across columns. Blaise Pascal also built a mechanical calculator in 1642 which has the capacity for eight digits.

In 1820 or 1821, Charles Babbage conceived of a "Difference Engine". It was a massive steam-powered mechanical calculator designed to print astronomical tables.Later the project was cancelled by the British government in 1842. Babbage's next idea was the Analytical Engine which used punch-cards and can perform simple conditional operations.It's thought to be a mechanical computer that can solve any mathematical problem.

Ada Byron,a countess, published analysis of the Analytical Engine which is our best record of its programming potential. In it she outlined the fundamentals of computer programming,in which data analysis, looping and memory addressing are included.

In 1936 Englishman Alan M. Turing while at Princeton University formalizes the notion of calculableness and adapts the notion of algorithm to the computation of functions. Turing's machine is defined to be capable of computing any calculable function.

Konrad Zuse, a German engineer, completed the first general purpose programmable calculator in 1941. He is the pioneer to use binary math and boolean logic in electronic calculation.

In late 1940s, 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—for example, to load it from disk, store it back on disk, and move it in memory.This concept became a fundamental of modern computing.

By December of 1943, a British computer used for code-breaking, which was called Colossue, became operational. ENIAC(Electronic Numerical Integrator Analyzor and Computer) was developed by the Ballistics Research Laboratory in Maryland to assist in the preparation of firing tables for artillery. It was built at the University of Pennsylvania's Moore School of Electrical Engineering and completed in November 1945.

In 1947, Bell Telephone Laboratories developed the transistor.UNIVAC, the Universal Automatic Computer was developed in 1951. It can store 12,000 digits in random access mercury-delay lines. EDVAC, for Electronic Discrete Variable Computer, was completed under contract for the Ordinance Department in 1952. In 1952 G.W. Dummer, a radar expert from the British Royal Radar Establishment, proposed that electronic equipment be manufactured as a solid block with no connecting wires.

In 1959, the integrated circuit was announced by both Texas Instruments and Fairchild Semiconductor. Ivan Sutherland demonstrated a program called Sketchpad on a TX-2 mainframe at MIT's Lincoln Labs in 1962.It allowed him to make engineering drawings with a light pen. At that time a typical minicomputer cost about $20,000,too expensive for a common American family. But just 6 years later, that was, in 1965, an IC that cost $1000 in 1959 just cost less than $10.Then came the famous Moore's Law: the number of components in an IC will double every year, which was predicted by Gordon Moore.

A breakthrough took place in 1968 when Doug Engelbart demonstrated a word processor, an early hypertext system and a collaborative application. three computer applications which are still commonly used today. Also in 1968, Gordon Moore and Robert Noyce founded the famous IT company Intel. Just one year later, Xerox created its Palo Alto Research Center - Xerox PARC whose mission was to explore the "architecture of information." In the same year, Edson deCastro, who leaved DEC to start Data General Corp,introduced the Nova, the first 16-bit minicomputer. Fairchild Semiconductor introduced a 256-bit RAM chip in 1970. In late 1970 Intel introduced a 1K RAM chip and the 4004, a 4-bit microprocessor. Two years later came the 8008, an 8-bit microprocessor.

In 1971, Bill Gates and Paul Allen formed Traf-O-Data to sell their computer traffic-analysis systems while Steve Jobs and Steve Wozniak were building and selling "blue boxes" in Southern California. Also in 1971, John Blankenbaker built the first personal computer, the Kenbak I.Gary Kildall wrote PL/M, the first high-level programming language for the Intel microprocessor in 1972 and in the same year Intel introduced the 8008, the first 8-bit microprocessor. Jonathan A. Titus designed the Mark-8, which was called "Your Personal Minicomputer". The MITS Altair 8800 introduced in January 1975, was hailed as the first "personal" computer. Thousands of orders for the 8800 rescued MITS from bankruptcy. In the same year, Microsoft is founded after Bill Gates and Paul Allen adapted and sold BASIC to MITS for the Altair PC. Apple started to sell its Apple II for $1,195, including 16K of RAM but no monitor in 1977.

Software Arts developed the first spreadsheet program, Visicalc, by the spring of 1979. It was released in October and was an immediate success. By 1980 Apple had captured 50% of the personal computer market.

In 1980 IBM approached Microsoft to develop BASIC for its personal computer project. The IBM PC was released in August, 1981. The Apple Macintosh appeared in 1984, which became a breakthrough in the history of PC. It featured a simple, graphical interface, used the 8-MHz, 32-bit Motorola 68000 CPU, and had a built-in 9-inch B/W screen.

Microsoft Windows 1.0 was introduced in November, 1985, and in the same year Motorola announced the 68040, a 32-bit 25-MHz microprocessor. In 1989 Microsoft's sales reached $1 billion, the first year to do so in the company's history.

Words and Expressions

abacus：算盘
Babylonia：巴比伦尼亚
Iraq：伊拉克
mathematician：数学家
algorithm：算法
resolve：解决
numerical：数字的
mechanism：机械，装置
register：记下（数字）；登记
predict：预测
Arabic：阿拉伯的
concept：概念
simplify：简化
civilization：文明
logs：对数
mechanical：机械的
conceive of：想出（主意，计划）；想象
astronomical：天文的
analytical：分析的
punch-card：打孔的资料卡（用于计算机）
countess：伯爵夫人
analysis：分析
potential：潜能
loop：循环（计算机术语）
calculableness：可计算性
functions：函数
programmable：可编程的
binary：二进制数字系统。二进制是计算机内部使用的数字系统，计算机不直接使用十进制，处理十进制时，先将其转换为二进制
boolean logic：布尔逻辑
manipulate：操作，使用
laboratory：实验室
artillery：炮的总称，炮兵的总称
transistor：（电子）晶体管
random：任意
discrete：不连续的，离散的
contract：合同，合约
radar：雷达
establishment：公司，军事组织
integrated circuit：集成电路
Texas Instruments：德州仪器公司
semiconductor：半导体
minicomputer：小型机
IC：集成电路
Moore's Law：摩尔定律
breakthrough：突破
hypertext：超文本
architecture：体系结构

microprocessor：微型处理器
bankruptcy：破产
spreadsheet：电子制表软件
graphical interface：图形界面

Common Abbreviations

UNIVAC（Universal Automatic Computer）：通用自动计算机
EDVAC（Electronic Discrete Variable Computer）：电子离散变量计算机
ENIAC（Electronic Numerical Integrator and Computer）：电子数字积分计算机
MIT（Massachusetts Institute of Technology）：（美国）麻省理工学院
IC（Integrated Circuit）：集成电路
DEC（Data Equipment Company）：（美国）数据设备公司
BASIC（Beginners All-purpose Symbolic Instruction Code）：初学者通用指令码
PC（Personal Computer）：个人电脑
CPU（Central Processing Unit）：中央处理器
BC（Before Christ）：公元前
AD（Anno Domini）：公元

Exercises

1. Choose the suitable answer from marked A,B,C,D to complete the sentences.

（1）The first mechanical calculator was built by_______ in 1623.

A. John Napier B. Wilhelm Schickard
C. Ada Byron D. Charles Babbage

（2）Konrad Zuse, a German engineer, completed the first general purpose progammable calculator in _________.

A. 1941 B. 1942
C. 1943 D. 1944

（3）In late 1940s, John Louis von Neumann announced the famous________.

A. stored program concept B. distributed system concept
C. shortes path theory D. PL/M language

（4）In 1959, both Texas Instruments and Fairchild Semiconductor announced the_______.

A. integrated circuit B. RAM
C. ROM C. transistor

（5）Microsoft was founded in________.

A. 1975 B. 1976
C. 1977 D. 1978

（6）Software Arts developed the first spreadsheet program, Visicalc, ________the spring of 1979.

A. to B. by
C. on D. in

(7) The Apple Macintosh appeared in 1984, ________became a breakthrough in the history of PC.

A. that B. what

C. who D. which

(8) In 1820 or 1821, Charles Babbage conceived ________ a "Difference Engine".

A. of B. out

C. in D. from

(9) A breakthrough________ at 1968 when Doug Engelbart demonstrated a word processor.

A. happened B. came true

C. took place D. appeared

(10) In 1989 Microsoft's sales________ $1 billion.

A. got B. formed

C. reached D. contained

2. Fill in the blanks.

(1) The Antikythera mechanism is a kind of tool used for ________ and ________ the motion of the stars and planets.

(2)________ allow multiplication and division to be reduced to addition and subtraction.

(3) Konrad Zuse is the pioneer to use binary math and ________ in electronic calculation.

(4) The Apple Macintosh featured a simple, ________, used the 8-MHz, 32-bit Motorola 68000 CPU, and had a built-in 9-inch B/W screen.

(5) In 1959, the ________was announced by both Texas Instruments and Fairchild Semiconductor.

3. Translate the following sentences into Chinese.

(1) During the war, von Neumann's expertise in hydrodynamics, ballistics, meteorology, game theory, and statistics, was put to good use in several projects.

(2) Postwar Von Neumann concentrated on the development of the Institute for Advanced Studies (IAS) computer and its copies around the world.

4. Questions and answers.

(1) What is the "Difference Engine" like?

(2) Briefly describe John Louis von Neumann's famous stored program concept.

Reading Materials

John Louis von Neumann

John Louis von Neumann : Born 28 December 1903, Budapest, Hungary; Died 8 February 1957, Washington DC; Brilliant mathematician, synthesizer, and promoter of the stored program concept, whose logical design of the IAS became the prototype of most of its successors - the von Neumann Architecture.

Von Neumann was a child prodigy, born into a banking family in Budapest, Hungary. When only six years old he could divide eight-digit numbers in his head. He received his early education in Budapest, under the tutelage of M. Fekete, with whom he published his first paper at the age of 18. Entering the University of Budapest in 1921, he studied Chemistry, moving his base of studies to both Berlin and Zurich before receiving his diploma in 1925 in Chemical Engineering. He returned to his first love of mathematics in completing his doctoral degree in 1928. he quickly gained a reputation in set theory, algebra, and quantum mechanics. At a time of political unrest in central Europe, hc was invited to visit Princeton University in 1930, and when the Institute for Advanced Studies was founded there in 1933, he was appointed to be one of the original six Professors of Mathematics, a position which he retained for the remainder of his life. At the instigation and sponsorship of Oskar Morganstern, von Neumann and Kurt Gödel became US citizens in time for their clearance for wartime work. There is an anecdote which tells of Morganstern driving them to their immigration interview, after having learned about the US Constitution and the history of the country. On the drive there Morganstern asked them if they had any questions which he could answer. Gödel replied that he had no questions but he had found some logical inconsistencies in the Constitution that he wanted to ask the Immigration officers about. Morganstern strongly recommended that he not ask questions, just answer them!

During 1936 through 1938 Alan Turing was a graduate student in the Department of Mathematics at Princeton and did his dissertation under Alonzo Church. Von Neumann invited Turing to stay on at the Institute as his assistant but he preferred to return to Cambridge; a year later Turing was involved in war work at Bletchley Park. This visit occurred shortly after Turing's publication of his 1934 paper "On Computable Numbers with an Application to the Entscheidungs-problem" which involved the concepts of logical design and the universal machine. It must be concluded that von Neumann knew of Turing's ideas, though whether he applied them to the design of the IAS Machine ten years later is questionable.

During the war, von Neumann's expertise in hydrodynamics, ballistics, meteorology, game theory, and statistics, was put to good use in several projects. This work led him to consider the use of mechanical devices for computation, and although the stories about von Neumann imply that his first computer encounter was with the ENIAC, in fact it was with Howard Aiken's Harvard Mark I (ASCC) calculator. His correspondence in 1944 shows his interest with the work of not only Aiken but also the electromechanical relay computers of George Stibitz, and the work by Jan Schilt at the Watson Scientific Computing Laboratory at Columbia University. By the latter years of World War II, von Neumann was playing the part of an executive management consultant, serving on several national committees, applying his amazing ability to rapidly see through problems to their solutions. Through these means he was also a conduit between groups of scientists who were otherwise shielded from each other by the requirements of secrecy. He brought together the needs of the Los Alamos National Laboratory (and the Manhattan Project) with the capabilities of firstly the engineers at the Moore School of

Electrical Engineering who were building the ENIAC, and later his own work on building the IAS machine. Several "supercomputers" were built by National Laboratories as copies of his machine.

Postwar Von Neumann concentrated on the development of the Institute for Advanced Studies (IAS) computer and its copies around the world. His work with the Los Alamos group continued and he continued to develop the synergism between computers capabilities and the needs for computational solutions to nuclear problems related to the hydrogen bomb.

Any computer scientist who reviews the formal obituaries of John von Neumann of the period shortly after his death will be struck by the lack of recognition of his involvement in the field of computers and computing. His Academy of Sciences biography, written by Salomon Bochner [1958], for example, includes but a single, short paragraph in ten pages – "... in 1944 von Neumann's attention turned to computing machines and, somewhat surprisingly, he decided to build his own. As the years progressed, he appeared to thrive on the multitudinousness of his tasks. It has been stated that von Neumann's electronic computer hastened the hydrogen bomb explosion on November 1, 1952." Dieudonné [1981] is a little more generous with words but appears to confuse the concept of the stored program concept with the wiring of computers: "Dissatisfied with the computing machines available immediately after the war, he was led to examine from its foundations the optimal method that such machines should follow, and he introduced new procedures in the logical organization, the 'codes' by which a fixed system of wiring could solve a great variety of problems."!

From the point of view of von Neumann's contributions to the field of computing, including the application of his concepts of mathematics to computing, and the application of computing to his other interests such as mathematical physics and economics, perhaps the most comprehensive is by Herman Goldstine. There has been some criticism of Goldstine's perspective since he personally was intimately involved in von Neumann's computing activities from the time of their chance meeting on the railroad platform at Aberdeen in 1944 through their joint activities at the Institute for Advanced Studies in developing the IAS machine.

There is no doubt that his insights into the organization of machines led to the infrastructure which is now known as the "von Neumann Architecture". However, von Neumann's ideas were not along those lines originally; he recognized the need for parallelism in computers but equally well recognized the problems of construction and hence settled for a sequential system of implementation. Through the report entitled First Draft of a Report on the EDVAC [1945], authored solely by von Neumann, the basic elements of the stored program concept were introduced to the industry. The EDVAC was intended to be the first stored program computer, but the summer school at the Moore School in 1946 there was so much emphasis in the EDVAC that Maurice Wilkes, Cambridge University Mathematical Laboratory, conceived his own design for the EDSAC, which became the world's first operational, stored-program computer.

In the 1950's von Neumann was employed as a consultant to IBM to review proposed and ongoing advanced technology projects. One day a week, von Neumann "held court" at 590 Madison Avenue, New York. On one of these occasions in 1954 he was confronted with the FORTRAN concept; John Backus remembered von Neumann being unimpressed and that he asked "why would you want more than machine language?" Frank Beckman, who was also present, recalled that von Neumann dismissed the whole development as "but an application of the idea of Turing's 'short code'." Donald Gillies, one of von Neumann's students at Princeton, and later a faculty member at the University of Illinois, recalled in the mid-1970's that the graduates students were being "used" to hand assemble programs into binary for their early machine (probably the IAS machine). He took time out to build an assembler, but when von Neumann found out about he was very angry, saying (paraphrased), "It is a waste of a valuable scientific computing instrument to use to do clerical work."

One last anecdote is about von Neumann's brilliant mathematical capabilities. The von Neumann household in Princeton was open to many social activities and on one such occasion someone posed the "fly and the train" problem to von Neumann. Quickly von Neumann came up with the answer. Suspecting that he had seen through the problem to discover a simple solution, he was asked how he solved the problem. "Simple", he responded, "I summed the series!" [From Nick Metropolis]

The Institute of Electrical and Electronics Engineers (IEEE) continues to honor John von Neumann through the presentation of an annual award in his name. The IEEE John von Neumann Medal was established by the Board of Directors in 1990 and may be presented annually "for outstanding achievements in computer-related science and technology." The achievements may be theoretical, technological, or entrepreneurial, and need not have been made immediately prior to the date of the award.

Words and Expressions

von Neumann：冯・诺依曼，电子计算机之父

brilliant：有才华的，卓越的

synthesizer：集大成者

promoter：促进者

prototype：原型

von Neumann Architecture：冯・诺依曼体系

prodigy：天才，神童

tutelage：监护

diploma：文凭

doctoral：博士的

reputation：名声

algebra：代数学

quantum mechanics：量子力学

unrest：动乱的局面

Princeton University：普林斯顿大学

original：最初的

retain：保持，保留

instigation：鼓动

sponsorship：赞助

anecdote：轶事，奇闻

immigration：外来的移民

Constitution：宪法

inconsistency：矛盾

dissertation：学位论文

involve：涉及
logical design：逻辑设计
universal machine：通用机
expertise：专家的意见；专门技术
hydrodynamics：流体力学
ballistics：弹道学；发射学
meteorology：气象学
statistics：统计学
computation：计算
imply：暗示；意味
encounter：遇到
calculator：计算器
correspondence：信件
electromechanical：电动机械的
Columbia University：哥伦比亚大学
executive：执行的
committees：委员会
amazing：令人惊异的
conduit：管道
shield：遮蔽，隐瞒
institute：学会，协会
synergism：合作
nuclear：核能的
hydrogen bomb：氢弹
obituary：讣告
recognition：承认，赏识
biography：传记
multitudinousness：大量，群集
hasten：促进
explosion：爆炸
confuse：搞乱，使糊涂
dissatisfied：不满意的
available：可用到的
foundation：基础
optimal：最佳的，最理想的
procedure：程序，手续
solve：解决
variety：种类
comprehensive：全面的，能充分理解的
criticism：批评，批判
perspective：观点，看法
intimately：密切的
joint：联合的
insight：洞察力，见识
infrastructure：基础构造
originally：最初，最先
parallelism：并行性（计算机术语）
sequential：串行的
implementation：实现
stored program：程序储存（原理）
emphasis：强调
Cambridge University Mathematical Laboratory：剑桥大学数学实验室
EDSAC：Electronic Delay Storage Automatic Computer 延迟存储电子自动计算机
ongoing：正在进行的
dismiss：解散的
faculty member：大学教学人员
clerical work：行政工作
outstanding：突出的，显著的
achievement：成就
theoretical：理论的
entrepreneurial：企业家的
prior to：在先的，在前的

Text 2 Hot Topics of Today's Computer Industry

Features of Today's Microprocessors

(1) Modular Architecture means to build an implementation that includes a few or even hundreds of processors, each with four functional units, each of which can operate on many data

items simultaneously with parallel-operation (SIMD) instructions.

(2) Software Portability across implementations is obtained through use of architecture-neutral means of software distribution.

(3) Multiple Levels of Parallelism is an implementation with more than one functional unit per processor unit provides MSIMD: multiple single-instruction multiple-data parallelism.

(4) Multiple Processor Units per Cluster is designed to incorporate the concept of multiple processors per implementation.As semiconductor technology advances, clusters with more processors per chip can be implemented.

(5) Multiple Functional Units per Processor Unit means to provide two to four functional units for each processor unit.

(6) Multithreaded Software comes naturally given the architecture's ability to execute multiple threads simultaneously on multiple processor units.

(7) Integral Support for Media-Rich Data is achieved when common media data types are supported and multiple simultaneous operations can be processed on that data.

(8)Load-Group instructions will increase bandwidth into the processor by simultaneously loading multiple registers from memory or an I/O device.

(9) Data Type-Independent Registers allow registers to be allocated as needed by each application, without restrictions imposed by hardware partitioning of the register set.

(10) Context Switch Optimization allows an operating system to minimize the number of registers saved and restored during a context switch.

Tips of DVD

DVD, the Digital Versatile Disc, started in 1994 as two competing formats, Super Disc (SD) and MultimediaCD (MMCD). DVD now is the result of an agreement by both camps on a single standard to meet the requirements of all the various industries involved.

DVD is a high capacity CD-size disc for video, multimedia, games and audio applications. Capacities for the read-only disc range from 4.7GB to 17.1GB. The high quality of video and audio has helped DVD-Video to compete very effectively with VHS for pre-recorded video titles, statistics showing that DVD is growing faster than any other consumer electronics format in the USA and Europe. PCs with DVD capability are also selling, but multimedia and games applications of DVD have been slow to start. The advent of new games consoles using DVD is also helping to stimulate further sales.

There are several specific kinds of DVD formats.

DVD-Video, which was launched in 1997 in the USA, has become the most successful of all the DVD formats, as it has proved to be an ideal vehicle for distributing video content from the movie industry. It can store a full-length movie in high quality video with surround sound audio on a disc the same size as a CD. DVD now accounts for the majority of video sales in the USA and Europe.

DVD-ROM is beginning to replace the CD-ROM and provide a new high capacity disc format for the computer industry. New PCs are now provided with DVD drives instead of CD