课内：

第 6 章：科技英语翻译

例 15：Only by studying such cases of human intelligence with all the details and by comparing the results of exact investigation with the solutions of AI (Artificial Intelligence) usually given in the elementary books on computer science can a computer engineer acquire a thorough understanding of theory and method in AI, develop intelligent programs that work in a humanlike way, and apply them in solving more complex and difficult problems that present computer can't.

参考译文：只有很详细地研究这些人类智能的情况，并把实际研究得出的结果与计算机科学基础论著上所提出的人工智能解决方案相比较,计算机工程师才能彻底地了解人工智能的理论和万法，开发出具有人类智能的计算机程序，并将其用于解决目前计算机不能解决的更为复杂和困难的问题。

例 16 ：With the advent of the space shuttle, it will be possible to put an orbiting solar power plant in stationary orbit 24 000 miles from the earth / that would collect solar energy almost continuously / and convert this energy either directly to electricity via photovoltaic cells or indirectly with flat plate or focused collectors / that would boil a carrying medium to produce steam / that would drive a Turbine.

参考译文：随看航天飞机的出现，人类有望将沿轨道运行的发电站送到离地球 24000 英里的一条定常轨道上去。该太阳能发电站几乎不间断地采集太阳能。并且它还能够用光电池（photovoltaic cells）将太阳能直接转换成电能，或者用平板集热器或聚焦集热器将太阳能间接转换成电能，通过集热器使热传导体汽化，进而驱动涡轮机发电。

例 17 ：The 4G will be a fully IP-based integrated system of systems and network of networks, achieved after the convergence of wired and wireless networks as well as computer, consumer electronics, communication technology, and several other convergences that will be capable of providing 100Mbit/s and 1 Gbit/s, respectively, in-outdoor and indoor environments with end-to-end QoS and high security, offering any kind of services anytime, anywhere, at affordable cost.

参考译文：4G 将是完全基于 IP 的集成系统和网络系统。它需要通过综合有线网络、无线网络、计算机、用户电子、通讯技术以及其他一些技术集成的运用来实

现。4G 将能够分别提供户外 100Mbit/s、户内 1Gbit/s 的速率，而且具备终端到终端的 QoS，具有更高的安全性，同时可以在任何时间、任何地点提供价格便宜的服务。

例 14： The most ambitious project so far is a transatlantic fiber-optic cable / to be built by 1988 that could significantly cut the cost of communication between the United States and Europe.

参考译文：迄今为止，最为雄心勃勃的工程是将于 1988 年铺成的横贯大西洋的光缆线路，这条线路将大大减少美国和欧洲之间的通讯费用。

例 25：Unlike 3G, which refers to a specific mobile standard and allows the transfer of data at a minimum accepted speed, 4G, or the fourth generation of wireless communications, refers to a collection of technologies and standards that will find their way into a range of new ubiquitous computing and connections systems.

参考译文：3G 指的是一种具体的移动通信标准，它允许数据传输速率保持在一个可以接受的最低值，而 4G，与 3G 不同，也就是第四代无限通信系统，则是一个技术和标准的集合，它以它的方式演进为一种新型的泛在计算和连接系统。

例 31：(1) For these forms of pollution as for all the others, (2) the destructive chain of cause and effect goes back to a prime cause, (3) too many cars, too many factories, too many detergents, too many pesticides, more and more trails left by supersonic jets,
inadequate methods for disinfecting sewers, too little water, too much carbon monoxide.

参考译文：(1)这些形式的污染像所有其他形式的污染一样，(2)其破坏性的因果关系链可归根于如下原因：(3)汽车、工厂、洗涤剂、杀虫剂太多，喷气式飞机留下的尾气太多，污水消毒处理方法不足，水源太少，一氧化碳过多。

例 32 :Although there is reason to hope that superconductivity may one day be found to exist in some materials at room temperature, for the moment is a phenomenon of the utterly cold.

参考译文：虽然有理由指望有一天可以发现某些材料在室温下会具有超导性，但目前超导性还只是一种在极冷情况下发生的现象。

例 33 :Each cylinder therefore is enclosed in a water jacket, / which forms part of a circuit / through which water is pumped continuously, and cooled by means of air drawn in from the outside atmosphere / by large rotary fans, worked by auxiliary motors.

参考译文：因此，每个气缸都用一个水套围着，水套形成循环回路的一部分。在这个回路中水受到水泵的驱使不停地流动。并由外面鼓进空气来使水冷却。鼓风用的大型旋转风扇是由辅助电机带动。

例 35：Manufacturing processes may be classified as unit production with small quantities being made and mass production with large number of identical parts being produced.

参考译文：制造方法可分为单件生产和大批量生产两类：单件生产是生产少量的机件，大批量生产则是生产大量相同的零件。

例 37：On account of the fact that there is always a resistance due to friction whenever one part of a machine moves over another, some work must be done in moving the parts of the machine itself.

参考译文：机器的某个部件在另一个部件上面移动,总会有由摩擦而产生的阻力，由于这种情况，机器自身的部件运动时就要做一些功。

例 38：Many man-made substances are replacing certain natural materials because either the quantity of the natural products cannot meet our ever-increasing requirement, or more often, because the physical property of the synthetic substahce, which is the common name for man-made materials, have been chosen, and even emphasized, so that it would be of the greatest use in the fields in which it is to be applied.

参考译文：许多合成材料通常也叫人造材料，正逐步取代某些天然材料，一是因为大燃制品的数量不能满足人们日益增长的需求,但更多的是因为合成材料具备果种物理性能,如果充分发挥这种特性，合成材料在其应用领域中会最大限度地发挥作用。

例 39：The technical possibility could well exist, therefore, of nationwide integrated transmission network of high capacity, controlled by computer, inter-connected globally by satellite and submarine cable, providing speedy and reliable communications throughout the world.

参考译文：建立覆盖全国的大容量的通讯网络，由计算机进行控制，通过卫星和海底电缆在全球从事快速可靠的通讯服务，这种可能性从技术上来讲是完全存在的。

例1："Automation"has been, and still is, a greatly misused word, but its proper meaning, and therefore its implications, is gradually becoming better understood.
(1) Perhaps I could attempt an explanation, if not a definition, by saying that it is a concept through which a machine-system, is caused to operate with maximum efficiency by means of adequate measurement, observation, and control of its behavior. (2) It involves a detailed and continuous knowledge of the functioning of the system, so that the best corrective action can be applied immediately when necessary. (3) Automation in major sense is brought to full fruition only through a thorough exploitation of its three major elements, communication, computation, and control-the three "Cs". (4) I believe there is a great need to make sure that some, at any rate, of the implications to our society of three "Cs" in combination are recognized and understood.

参考译文: 自动化一直是，而且现在仍然是一个被许多人误用的词，但是它固有的意义以及它多方面的含义正逐渐为人们所理解。如果不是非下定义不可的话，也许我可以试着这样去阐释：自动化就是通过对机器系统的运转进行适当的测量、观察和控制，使之以最高的效率运转的这样一个概念。自动化要求不断地详细了解机器的工作，一有必要可以立即采取最佳校正措施。从这一确切含义来看，自动化只有在充分利用了它的三个主要因素，即通讯、计算和控制之后，才能完全实现。因此，我认为很有必要使大家认识和了解这种通讯、计算和控制三结合对我们社会的意义，至少是某些方面的意义。

例2：ASP 模式是中小企业实现信息化的有效途径，，中小企业对 ASP 服务的需求正日趋成熟，将为通信运营商提供难得的市场机会。
译文：ASP mode is known as an effective way for SMBs to implement informalization, and the demand for ASP services in SMBs is becoming increasingly mature, which offers communication service providers golden opportunities.

例3：自动化被认为是现代技术最伟大的成就之一。在今天的工厂里,现在经常可

以看到自动控制装置在工作,取得自动调节的效果。随着电子计算机的发展及其与自动系统的结合,可以说自动化就是在用编制成程序的指令的指挥下,结合对操作的情况进行自动测定、反馈,以及对决策进行控制,来完成自动操作。

参考译文：Automation is known as one of the greatest achievements of modern technology. Automatic controls are now often seen at work achieving self-regulation in today's factories. With the development of electronic computers and their incorporation into automated systems, automation may be said to be the performance of automatic operations directed by programmed commands combined with automatic measurement of action, feedback, and decision-making control.

第 7 章：科研论文摘要的翻译

Moves	Function/description	Question asked
Move 1：Situating the research	Setting the scene for the current research	What has been known about the field/topic of research?
Move 2：Presenting the research	Stating the purpose of the study, research questions and/or hypotheses	What is the study about?
Move 3：Describing the methodology	Describing the materials, subjects, variables, procedures	How was the research done?
Move 4：Summarizing the findings	Reporting the main findings of the study	What did the research find?
Move 5：Discussing the research	Interpreting the results/findings and/or giving recommendations, implications/applications of the study	What do the results mean? So what?

例 1

摘要 :针对传统的基于视觉密码的图像秘密共享方案存在像素扩张导致其只能共享小尺寸的秘密图像、信息隐藏效率较低的问题 ,提出一种能够提高信息隐藏容量的(t , k , n)多重门限图像秘密共享方案。该方案利用秘密图像信息控制视觉密码方案中共享矩阵的选取 ,从而实现秘密图像在视觉密码方案中的隐藏。在秘密图像恢复的第一阶段 ,任意 t 个参与者直接叠加其影子图像后可以视觉解密出低质量的秘密图像信息 ;在第二阶段 ,任意 k 个参与者可以从影子图像中提取出隐藏的信息 ,并通过计算恢复出精确的灰度秘密图像。相对于传统的视觉密码方案,本文方案在不影响视觉密码恢复图像的视觉质量前提下 ,可以隐藏更多的秘密图像信息,而像素扩张尺寸较小。

参考译文：

Abstract: From the point of view of information hiding, traditional visual cryptography scheme(VCS)is not an efficient method. It can only share a small sized secret image due to the large pixel expansion. A (t, k, n) multi threshold image secret sharing scheme **is proposed to** increase the amount of hidden information. A grayscale secret image **is hidden in** a VCS to guide the choice of share matrices. In the first phase of the reconstruction process, any t participants **can stack** their shadow images to decode avague secret image by human visual system. In the second phase, any k participants **can extract** additional information hidden in their shadow images, and **reveal** a precise grayscale secret image by computation. Compared with the traditional VCS, the proposed scheme **can hide** more information of the grayscale secret image, and **has** smaller size expansion without deteriorating the visual quality of the revealed image of VCS.

例 2

摘要 :针对物联网应用中的频谱使用特性提出一种距离和业务结合的频谱接入方法。首先根据非系统用户与系统用户的距离关系构建用于标识系统用户信道可用度的列表。以此提供非系统用户间的资源分配等级。其次，根据非系统用户和系统用户对信道使用特性建立业务匹配关系式,在可用度列表和业务匹配关系式的基础上，构建干扰驱动效用函数，从跨层优化角度设计频谱接入方法。结果证明该方案既能够抑制非系统用户对系统用户干扰。又能够确保物联网应用的服务质量的资源共享。

参考译文:

Abstract: An accessing scheme which combines distance with service for the applications in IOT networks **was proposed**. First, a channel-availability list based on the distance relationship between system and non-system users **was built**. The list **provided** a priority of each channel for non-system users. Then the service-matched expression between the IOT user and the licensed user **was proposed.** Based on the list and the expression, an interference-driven utility function **was defined.** Finally, the accessing scheme **was optimized** from the cross-layer design point of view. It **was proved** that the scheme guaranteed both the interference suppression and the resource sharing in IOT based on the QoS requirements.

例 4

摘要:基于真实 AS 级互联网拓扑实测数据进行层次特性和 AS 关系特性分析,提出了一种基于核数分层的 AS 关系拓扑动态演化模型。建模和仿真评估表明该模型在整体上具与实际网络相似的拓扑宏特性 ,还再现了 AS 商业关系的规律,是一种能够逼真模拟互联网 AS 级拓扑宏观、微观特性的动态演化模型,并且作为一种AS 关系推测算法。还能为任意的 AS 级无向图提供带 AS 关系标注的拓扑图,拓展了模型的应用。

参考译文:

Abstract: Based on the in-depth analysis of the massive real AS-level topology data, **we abstracted** the multi characteristics describing AS-level topology's hierarchy and AS relationships, and gave material modeling ways about network's hierarchical partition and business relationships between ASs. Then,

we proposed a novel algorithm for generating synthetic graphs annotated with AS relationships named ASRTM based on the k-core decomposition. Finally, the numerical simulations and analysis results compared with the real AS- level topology data show that most of macroscopic statistics closed to real networks', including power-law degree distribution and AS relationships properties. Otherwise, ASRTM, as a conferring algorithm about AS relationships, can give a graph annotated with AS relationships for given undirected topology graph.

例 9：本文介绍了在 IBM-PC 机上开发的一种功能卡,将它直接插入主机的 I/O 扩展槽就可在 CRT 上直接显示出转速、扭矩的瞬时值及转动方向。

参考译文：

In this paper a functional car is presented for IBM-PC. If the car is plugged in the I/O extension slot of the manframe or extension bus of PC, the instantaneous value of torque, turn speed and turn direction can be viewed directly on CRT.

济南通信开发中小企业 ASP 业务的策略研究

摘要：ASP 模式是中小企业实现信息化的有效途径，中小企业对 ASP 服务的需求正日趋成熟，将为通信运营商提供难得的市场机会。分析了 ASP 的基本含义和服务内容，提出了中小企业对 ASP 的五项服务要求。从济南通信公司业务发展的角度，探讨了行之有效的发展策略，包括：辩证地看待 ASP 业务的发展前景;客观地分析自身的优势与不足；找准定位，确立 ASP 业务的发展重点；加强与优秀软件开发企业的结盟和合作；重视营销和推广，积极培育和发展 ASP 市场。

Solutions for the Development of ASP

Business in SMBs of Jinan Communication Corporation

Abstract: ASP mode is known as an effective way for SMBs to implement informatization, and the demand for ASP services in SMBs is becoming increasingly mature, which offers communication service providers a golden opportunities. By analyzing the basic connotation and service contents of ASP mode and indicating the five demands of SMBs for ASP service, the present research aims at exploring practical strategies from the perspective of business development of Jinan Communication Corporation, namely, holding

a dialectic view on the future of ASP services; analyzing objectively our own strengths and drawbacks; obtaining a proper position to establish development focuses of ASP business; strengthening the alliance and cooperation with excellent software development enterprises; laying stress on marketing and promotion, and actively cultivating and developing ASP markets.