МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ОДЕСЬКИЙ ДЕРЖАВНИЙ ЕКОЛОГІЧНИЙ УНІВЕРСИТЕТ

МЕТОДИЧНІ ВКАЗІВКИ
для СРС та навчальний матеріал
з англійської мови

Одеса – 2008

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ОДЕСЬКИЙ ДЕРЖАВНИЙ ЕКОЛОГІЧНИЙ УНІВЕРСИТЕТ

МЕТОДИЧНІ ВКАЗІВКИ
для СРС та навчальний матеріал
з англійської мови
для студентів ІІІ курсу
денної форми навчання
Напрям підготовки – „Комп'ютерні науки"

Затверджено

методичною комісією факультету
к о м п'ю т е р них н а у к
протокол № __ від __. __. 2008

Одеса – 2008

Методичні вказівки для СРС та навчальний матеріал з англійської мови для студентів III курсу денної форми навчання.
Напрям підготовки: комп'ютерні науки

Укладач: к.н.ф., доц. Шотова-Ніколенко Г.В., Одеса, ОДЕКУ, 2008. – 32 с.

ЗМІСТ

ПЕРЕДМОВА

Практичне володіння англійської мовою передбачає вміння читати літературу за фахом за допомогою словника, знаходити корисну та потрібну для роботи інформацію, а також перекладати тексти за фахом рідною мовою.

Методичні вказівки для СРС та навчальний матеріал з англійської мови призначені для студентів III курсу денної форми навчання за спеціальністю „Комп'ютерні науки", що, розраховані на 17 годин аудиторної роботи та на 17 годин самостійної роботи студентів.

Мета роботи – розвинути навички читання, усного мовлення, аналізу та перекладу текстів на матеріалі наукової літератури за фахом.

Методичні вказівки складаються з восьми уроків, що вміщують неадаптований текстовий матеріал відібраний з оригінальної науково-популярної та науково-технічної спеціальної літератури. Текстовий матеріал уроків призначений для опанування заходів ознайомлюючого та навчального читання, відпрацювання вмінь аналізувати різні рівні та елементи тексту, розвитку навичок перекладу.

Після вивчення даного курсу студенти повинні знати та вміти:

- читати та перекладати науково-технічну англомовну літературу за фахом для одержання необхідної інформації;
- розуміти зміст прочитаного та лексико-граматичний матеріал, наданий у методичних вказівках;
- брати участь в усному спілкуванні англійською мовою в обсязі матеріалу, передбаченого програмою.
- знати методику перекладу, що передбачає вміння визначати за формальними ознаками у спеціальному тексті засвоєні конструкції, а також розширення словникового запасу.

LESSON I

I. Read aloud, translate and memorize the following words and expressions:

network	turnpike
to be designed	pattern
digital traffic	to be authorized to
downloading films	a cable television
according to	adjacent fields
connectivity	maintenance costs

II. Read and translate in written:

Text ***HISTORY AND THE INTERNET***

Will charging based on content come to the internet? The history of transportation offers clues.

On the Beverley Beck waterway in northern England in the early 18th century, tolls were the same for almost any cargo: four pence per ton. In 1744, however, came a dramatic change. Thenceforth, shippers had to pay 12 pence per ton to send iron or lead, but six pence for the same weight of timber, stone or salt. There have been similar developments in transport networks many times since, be they railways, roads or telephone systems. Charges are usually uniform at first, but later, network operators introduce more complicated price structures based on what is carried. Sometimes these are based on cost. Often, though, they reflect price discrimination: charging based on differences in customers' willingness to pay.

So far the internet has been free of such discrimination. Indeed, some believe that is one of the chief reasons for its success. The system was designed to be decentralized and "open": it carries all digital traffic, be it song or spam, for the same price. Yet many telecoms companies, which control the wires over which most consumers are connected to the internet, want to change this. They claim that charging different prices for different uses, such as telephone calls or

downloading films, will give them the means and incentive to invest in better-engineered networks. So will price discrimination catch up with the internet too? Andrew Odlyzko, a professor at the University of Minnesota, divined lessons from the history of transportation to explain the telecoms industry's attraction to price discrimination, and what it may mean in future. Of course, in general telecoms, companies already exploit variations in what customers are willing to pay for digital bits, depending on whether they take the form of a cable television programme or an SMS text message (see chart). On the internet, however, charging according to content would mark a big change.

In transport, this has been the norm for centuries. On England's canals, prices by cargo varied widely by the 1790s, according to both content and ultimate use: for instance, transport was free for manure for adjacent fields and stone for road repairs. To some extent, regulation limited canal operators' ability to exploit their market power: until 1845, they were barred from offering transport service themselves, in a "structural separation" of the sort sometimes proposed in telecoms today.

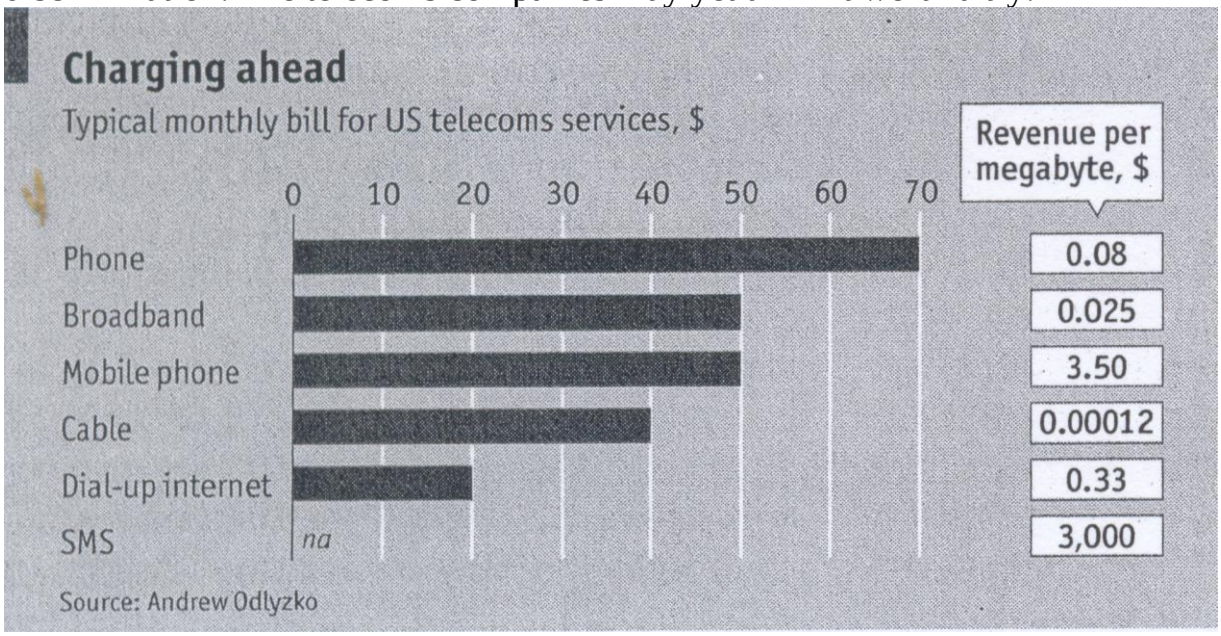
Turnpikes followed the same pattern. "Traditionally, the King's Highway was open to all," Mr Odlyzko notes. "The problem was how to keep it in good condition." In 1663, the first turnpike was authorized to collect tolls. Though protests were frequent and occasionally violent, turnpikes flourished. Later, complaints over canal prices helped the development of the railways. On the rails, too, wear (and thus maintenance costs) depended on weight, yet costs were soon based on what was transported. Eventually, price differences led to an outcry and, ultimately, regulation.

To some extent, price discrimination seems to have been beneficial. It allowed the Beverley Beck waterway, which had been making a loss, to stay in business. Early turnpike tolls led to improved road conditions so that transport eventually became cheaper. On the other hand, price discrimination causes resentment: many people think charging on the basis of willingness to pay unfair. It also encourages evasion, and requires frequent inspections to ensure that people pay the correct price.

Road map for the internet

On the net, discrimination might mean one price for web and e-mail traffic, another for instant messaging and still others for telephone calls, music and films. Is it likely? Mr Odlyzko hopes not, although history strongly suggests that the temptation exists. He thinks that price discrimination might not be in telecoms companies' interests after all. Unlike on canals, toll roads and so forth, internet capacity is abundant. Internet service is therefore a commodity. Simpler, flat-rate pricing, he argues, is likely to increase usage: discrimination would turn some users away.

Indeed, he says, distinguishing between different types of traffic would mean so much technical rejigging that the openness of the internet would be destroyed. Because the internet is decentralized and simply priced, it is cheap for many other networks – run by big companies, universities and telecoms firms-to connect to it. This in turn gives the internet a great capacity for innovation. Price discrimination could jeopardize all this. "While content delivery does lend itself to a closed network, connectivity does not. Open networks are likely to win because they can attract more revenues from users," Mr Odlyzko says. Is this wishful thinking? History, as he shows, is full of examples of successful price discrimination. The telecoms companies may yet think it worth a try.



III. Formulate 10 questions on the above text and find answers.

IV. Give a shot summery of the text.

V. Insert the correct words:

THE NOTION OF COMPUTER. THE VON NEUMANN'S SCHEME

. . . . . is a machine used for fulfilling a . . . . . strictly, defined sequence of actions dealing with information processing.

Attempts to invent … . . , that would be able to make . . . . . root deeply into the human history. It was in the extreme antiquity that well-known . . . . . was invented. Later appeared more complicated machines made by a French mathematician Blaise Pascal (1623 – 62) and German mathematician Baron Gottfried Wilhelm von Leibniz. Pascal's . . . . . could perform only two operations – addition and subtraction, Leibniz's machine performed all the four operations – addition, ... division and . . . . . .

In 1823 an English mathematician materialized the idea of . . . . . for processing. He called his invention . . . . . This machine could store the numbers that were processed.

In 20 years after his death an American scientist Herman Hollerith created electro-mechanical counting machine.

Later in the end of 1930s – at the beginning of 1940s in Germany several counting machines for fulfilling . . . . . were built up.

In June 1945 a scheme of a contemporary computer was suggested by John Von Neumaiin (Janos, 1903 – 57) – an American scientist of Hungarian origin. According to this scheme a computer consists of two main parts: . . . . . and . . . . . (CPU).

Central Processing Unit is the main working element of a computer used for processing information. . . . . is used to store information for further extracting and transformation.

So the memory stores the information and the CPU works with it. Information stored in the memory consists of data and method of their processing.

For achieving data interchange between human and computer the so-called …… were included into its scheme.

Some of them are used to enter the information into computer; these peripherals are called data input devices. Others serve for information outlet. Such facilities are called data output devices.

---

a gear, **computer**, **calculations**, **specified**, **counting machine**, **Abacus**, **Analytical Machine**, **memory and central processing unit**, **digital data**, **memory**, **peripherals**, **a device**, **complicated engineer calculations**, **subtraction**, **multiplication**.

LESSON II

I. Read aloud, translate and memorize the following words and expressions:

efficient
an online subscription
innovative
to launch
business proposition
high-speed internet links for downloads
to make its first profit
an easier way to rent
prepaid mailing envelope
to reckon

II. Read and translate in written:

Text ***VIRTUAL FUN***

E-commerce companies like to sum up in a single phrase what their business is about. "Making inefficient markets efficient," is how eBay's management explains what it does. "We try to figure out what customers want and then give it to them," says Amazon's Jeff Bezos. Reed Hastings's one-liner is more curious: "We're a goose-bump-delivery device."

Having got stung with a $40 late-payment charge for failing to return a rented DVD on time, Mr Hastings decided there had to be an easier way to rent movies. In 1999 he started an online subscription service called Netflix. The company, based in Los Gatos, California, now has 1.5m subscribers who order DVDs over the internet and receive and return them through the post. This might not seem very innovative, but it has been extraordinarily successful. Netflix went public in 2002. In 2003 it had revenues of $272m, up 78% on the year before, and made its first profit, of $6.5m. If the business keeps this up, revenues will hit $1 billion in 2006.

Netflix faces a host of competitors, including high-street giants such as Blockbuster, which has seen a decline in DVD rentals. So how does the company differentiate itself from the rest? That is where the goose-bumps come in. Movies are about, emotions as much as entertainment. Seeing a good movie can make someone's day. People like to tell others about it, and the word spreads.

What Netflix does is to make this happen easily and cheaply. For $19.95 a month you can rent up to three DVDs at a time and keep them for as long as you like. Users compile an online list of films they want to see. When they return a DVD in its prepaid mailing envelope, the next one on their list is delivered, usually overnight. Netflix has more than 18,000 movie titles on offer, which would overwhelm most bricks-and-mortar stores. But it also tries to build a sense of community amongst its members, encouraging them to write reviews and to compare and discuss their viewing lists. Just as Amazon does with books, Netflix also makes personal recommendations based on subscribers' past viewing habits.

Blockbuster is now trying to copy Netflix with its own version of online DVD renting. So too is Wal-Mart. But provided Netflix can keep up its service levels, it should stay ahead of the pack. It is expanding in other American cities and is planning to launch a service in Britain. Wal-Mart may be the world's largest retailer, but it is not an obvious brand for movie buffs to turn to.

The next big thing is likely to be video-on-demand. That is not necessarily a threat for Netflix: its business proposition is delivering movies, and whether a film arrives through the post or is downloaded via a broadband link should not make any difference. The company plans to introduce its first downloading

service later this year. But Mr Hastings expects only modest interest at first because DVDs are so easy and convenient to use, and many of the latest DVD players are portable. That could change, he reckons, once DVD players come equipped with wireless, high-speed internet links for downloads.

III. Formulate 10 questions on the above text and find answers.

IV. Give a shot summery of the text.

V. Insert the correct words:

CD-ROM

CD-ROM is apparently the most familiar information storage facility. CD-ROM means . . . . . – Read Only Memory. CDs are widely spread, as they can contain up to 800 . . . . . of multimedia programs, that is approximately equal to 556 3,5" . . . . . (diskettes).

CD-ROM resembles much audio CDs. Actually the majority of . . . . . can play audio CDs, however there hasn't been back . . . . . so far, although it may now be available. Compact disks are usually made of . . . . . with aluminum alloy spread upon its surface, which is covered with plastic to protect a CD from dust and fingerprints. The information is stored by being represented as a number of. . . . . A low-power . . . . . is used to read a compact disk in the CD-ROM drive. Availability of pits in the aluminum layer is detected by laser reflection: a faint reflection or its complete absence shows that there is a pit in this place, an intense reflection – that there is none. The drive "sends" to the computer the following sequence: "pit – no pit" and the latter interprets it as . . . . . Then the binary code is transformed into a text, sound, cartoon or video.

The time, that computer needs to find the information, is called . . . . . It is usually measured in . . . . . The shorter access time is, the faster computer reacts to your . . . . . Information can be read as soon as the laser is positioned over the required part of the disk. The speed at which the information is sent to computer is called . . . . . It is measured with the amount of information that computer can read per second.

Multimedia computer systems are usually supplied with a CD-ROM drive, ... with speakers and a sound card. Sound card is set on the main board. It analyses the contents of sound files and plays them back through the speakers or headphones. It is sound card that will also record sound from a . . . . . or any other signal source. After that computer translates . . . . . into digits, in other words into binary code, which it is able to read. Then the code is stored in the computer's memory.

megabytes, Compact Disk, compatibility, floppy disks, tiny pits, CD-ROM drives, a binary code, polycarbonate, stereo playback system, laser ray, access time, commands, microphone, milliseconds, acoustic waves, data rate.

LESSON III

I. Read aloud, translate and memorize the following words and expressions:

a household penetration	to be persuaded to
to be compatible with	to devise a coherent strategy
slimmer version	the widespread adoption
to delay	file-sharing service
to get a foothold	search engine

II. Read and translate in written:

Text ***TIPPING OVER***

The main reason why people in the e-commerce industry are watching Netflix with such interest is that the movie-delivery business may be close to the "tipping point", where offline rivals find that so many of their customers have migrated to the internet that their businesses are no longer viable. This can take time to happen, perhaps until leases on shops come up for renewal and declining revenues persuade proprietors to throw in the towel. In part of the San Francisco Bay area, Netflix has already achieved a household penetration of 7%, which could rise to 10% within a year.

In the travel industry, where 20% of bookings in America are now online, many high-street travel agents are already shutting up shop. As the offline world retreats, the online businesses will get another boost. That already seems to be happening in the music world, where traditional record shops are closing as millions of music files are downloaded, many of them to be stored on portable players.

The most successful portable music player, so far, is Apple's iPod. The introduction in America in February of a new, slimmer version proved so successful that the company delayed its European launch because of a shortage of hard drives for the machines (providing an opportunity for eBay entrepreneurs to offer these scarce items – at a premium – to customers in Europe). Thanks to the combination of its fashionable technology and its online

music store, iTunes, Apple is now selling some 2.5m songs a week. But to expand its sales worldwide, it still needs to establish a music-downloading service outside America – and comply with many different copyright laws.

The music files available from iTunes are compatible only with Apple's iPod, but Apple has done a deal with Hewlett-Packard for its iTunes jukebox software to be pre-installed on that company's computers, which should increase its number of users. This summer, HP will also start to offer its own-brand version of the iPod.

Meanwhile, if rival manufacturers using a different system can get a foothold, Apple's early lead could be eroded. A number of big groups are challenging Apple. Wal-Mart, for one, is pricing its downloadable songs at 88 cents, as against 99 cents at iTunes. As with movies, Wal-Mart may not be a strong brand in music, but the retail giant cannot be dismissed lightly. Microsoft and Sony are among the other companies working on new players and online music services. And further disruption could come in the form of different products. Mobile phones, for instance, are carried around by people most of the time, so it seems likely that they too will become portable music players.

Online music is potentially big business, but people have to be persuaded to pay for it. When Napster operated an illegal file-sharing service for music fans, up to 5om people a day were using it. The music industry hounded such services through the courts, and in America even brought legal action against some users. Napster, which is now owned by Roxio, a Silicon Valley software firm, has been reinvented as a paid-for service, and is promoting subscriptions rather than payment for individual tunes.

The movie business is watching closely how music is sold online, but has yet to devise a coherent strategy for managing the transition to the web. This would seem to be an ideal job for IAC's Barry Diller, who reckons Hollywood is "completely challenged" by technological change. Following a long career as a Hollywood mogul, he became intrigued by the commercial possibilities of the internet in the late 1990s. In 2001 he sold the cable, television and film parts of his company (then called USA Networks) to France's Vivendi Universal for $10.3 billion. So far, he has spent more than $10 billion on a number of internet-related acquisitions.

Is he tempted to add a film or television company to his group? Not necessarily, he says; but neither does he rule it out if a "real opportunity" presents itself. There are few certainties in life, reckons Mr Diller, but he does see the internet as an economic certainty. All the basic plumbing will soon be in place, from the widespread adoption of broadband to the infrastructure needed for delivery companies to get goods to customers.

And yet the internet still remains capable of producing surprises. New services can leave people wondering how they ever managed without them. The most notable of these is the search engine.

III. Formulate 10 questions on the above text and find answers.

IV. Give a shot summery of the text.

V. Insert the correct words:

HOW INFORMATION IS MEASURED INSIDE A COMPUTER

It has become a tradition to consider . . . . . of bits equal to eight. This sequence is called . . . . . It is possible to designate binary code: 2^8 = 256 numbers from 0 to 255 with the help of one byte.

Bytes are united in a sequence length 1024 (=2^{10}). This sequence is called . . . . . (KB) and is also used . . . . . the amount of information. The prefix Kilo comes from Greek and means a thousand (Kilogram = 1000 gram, Kilometer = 1000 meters). The number that is a power of two the closest to a thousand is 1024. 1024 bytes make exactly a Kilobyte (KB).

1024 KB is a megabyte (MB), 1024 MB is a gigabyte (GB), and 1024 GB is terabyte (T-byte).

So, bit, byte, kilobyte, megabyte, gigabyte and T-byte are . . . . . of information.

Thus, with the help of binary codes, ciphers and their sequences – numbers become understandable for any . . . . . The process of the information transformation is represented in the following scheme:

If this . . . . . is read from the left to the right it shows the means of information input. The transformation of into binary codes is done by means of data input devices. The same scheme, being read from the right to the left, presents a means of representation of . . . . . of computer's work - output data. This process is done, by data output devices.

Computer’s memory contains information only in the form of binary codes (0 and 1), CPU performs . . . . . with data only this way.

---

byte, to measure, a sequence, kilobyte, scheme, the results, operations, input data, basic units, computer.

LESSON IV

I. Read aloud, translate and memorize the following words and expressions:

crawl around the world wide web	up-to-date information
the gateways to the internet	the recovery in advertising expenditure
to display an index of web	the paid-search business
to distinguish	in partnership with
to prevent	to sign up for additional services

II. Read and translate in written:

Text ***SPIDERS IN THE WEB***

Searching for profit has become highly competitive

The tech folk in Silicon Valley knew something was up last year when another web spider appeared. Web spiders are powerful software programs that crawl around the world wide web, automatically analyzing words, following links and collecting vast amounts of data. The catalogues they assemble are used by search engines to display an index of web pages in response to key words entered by a user. What was intriguing about this particular spider is that it belonged to Microsoft. Even the world's biggest software company cannot afford to ignore the power of search.

Only a few years ago, search did not seem to matter very much. The gateways to the internet were going to be "portals": sites such as Yahoo!, Microsoft's MSN and AOL. These sites would provide users with everything they needed, including links to whatever internet pages the portals' editors deemed useful. The idea was to keep users cosseted within the portals, where they could be sold things, presented with ads and encouraged to sign up for additional services.

But Sergey Brin and Larry Page had a different idea. They started building a search engine that would not only examine the words on web pages, but also look at how and where those words were being used and at the number

of other websites linked to that page. Their search engine would rank pages in their likely order of usefulness.

In 1998, the pair put their studies at California's Stanford University on hold to start Google. Having raised $1m, they set up in a friend's garage, answering 10,000 search queries a day. These days Google deals with more than ten times that number every second. Its search methods, which form part of a secret algorithm, have become far more elaborate. Put in the word Google, and you get links to over 45m other web pages in a quarter-second – with google.com at the top of the list. Instead of encouraging you to linger, Google's spartan website is designed to find links as quickly as possible and move you on. For many people, it is now their launch point on to the internet.

Despite its simple appearance, Google has found a way to make lots of money. Just how much became clear for the first time last month when the privately held company announced plans for a stock-market listing, with its shares to be sold by public auction. Its net revenue in 2003 turned out to have been $ 962m, 176 % up on the previous year. Google is an extremely successful company, but it is going to have a fight on its hands.

The way to make money out of search is to sell the words people put in when they look for things on the web. This means that whoever bids the most for a particular term, "digital cameras", say, gets their link on the top of a list whenever anyone types that phrase into the search box. The convention is to distinguish between independent search results and those that are paid for. Google lists its "sponsored" links on the right of its page; Yahoo! puts them in a box at the top.

Searches are now such an important tool for connecting buyers and sellers that some companies spend most of their marketing budget on getting a high page-ranking in the sponsored lists and on various services which can help websites move up the independent listings. A website operator could, for instance, pay a search-engine-optimisation company to help him design his site to maximise its page ratings. Such companies sometimes employ tricks such as setting up "ghost" web pages, which make a site appear more widely used than it really is. Google and other search companies constantly fiddle with their algorithms to try to prevent their independent search results from being manipulated in this way.

But there is also a grey area. Yahoo!, for instance, offers a service that lets traders pay to have their website re-crawled every 48 hours instead of waiting (sometimes up to a month) for a web spider's regular update of the search engine's catalogue of pages. Paying to be re-crawled ensures that when a search is carried out the company's latest products and prices will be included. Yahoo! says such payments do not buy a better placement in its independent results. But sites with more up-to-date information are more likely to be relevant to a search, and therefore tend to rise higher.

According to most analysts, the paid-search business is leading the recovery in advertising expenditure on the internet. A study by the New York-based Interactive Advertising Bureau in partnership with PricewaterhouseCoopers, a consultancy, found that online ad spending in America last year grew by 21% to $7.3 billion.

III. Formulate 10 questions on the above text and find answers.

IV. Give a shot summery of the text.

V. Put the proper words into sentences:

1. Computer security is more … today than it was in the past.
2. International literature tells lurid stories about computer viruses … – about bank-swindles, espionage, … sent from one computer to destroy the contents of others.
3. Movies like War Games have dramatized the dangers from … entry to the computer systems that control nuclear weapons.
4. Methods used in computer-based criminal activity range from, switching or ... data as they enter the computer, to pulling self-concealing instruction into the software.
5. The person who develops a ... lock for the computer data will make a fortune.
6. ... is the name generally given to software that causes … of computer files.
7. People must be taught that some kinds of help, such as assisting … users with passwords are inappropriate.
8. According to a published article, the Mafia has kidnapped an IBM executive and cut off his finger because it needed his … to breach a computer security system.
9. Data sent over communication lines can be protected by encryption, the process of scrambling ...
10. Firewall is security measures taken to block … access to an Internet site.

---

foolproof, complicated, virus, unauthorized, crime, fingerprint, altering, messages.

LESSON V

I. Read aloud, translate and memorize the following words and expressions:

the great advantage high-speed internet connections

a search-engine link	to provide personal preferences
an automated bidding process	to retrieve past articles
a proprietary service	the storage space
improving technology	the paid-search advertising

II. Read and translate in written:

Text ***COUNT THE CLICKS***

The great advantage of paid search as a marketing expenditure is that it has a built-in evaluation mechanism: companies pay only if a user clicks through to them from a search-engine link. Companies can also track how many of those visitors eventually end up buying something, so they can work out just how much it is worth bidding for a search term.

Google's paid-search service, known as AdWords, in effect sells advertisers a "pre-qualified lead", says Sheryl Sandberg, who runs the company's global online sales and operations. Google employs an automated bidding process using a version of what economists call a Vickery second-price auction. Winning bidders pay only one cent more than the bidder below them. Hence, if there are bids of $1,50 cents, 25 cents and so on, the winner of the top place pays 51 cents a click-through, the winner of the second place pays 26 cents, and so on. This, Google believes, encourages companies to bid whatever they think a search term is worth, safe in the knowledge that the final price they pay will be less. But even payment does not necessarily guarantee the top slot. Google also ranks its sponsored links according to their usefulness, which means that if more people click on a sponsored link further down the list, that link can overtake sponsors who are paying more. "That way we reward relevance," adds Ms Sandberg.

The opening shot in the search war came in February when Yahoo!, also based in Silicon Valley, sacked its neighbour Google as the provider of its search engine and replaced it with a proprietary service. Yahoo! has been investing heavily in search technology. In July 2003 it paid $1.6 billion for Overture Services, a company that pioneered much of the paid-search advertising business, and in March this year it agreed to buy France's Kelkoo for €475m ($576 m). Kelkoo operates an internet search service for comparison shopping. Google also recently put a link to Froogle, its comparison-shopping service, on its main site.

Yahoo!, which was also founded by two Stanford students, David Filo and Jerry Yang, has been growing strongly with the help of paid-search advertising. The first quarter of 2004 was the most successful yet in the company's history, says Terry Semel, Yahoo!'s chief executive. Both revenue and profits more than doubled on a year earlier, to $758m and $101m respectively. Yahoo! is transforming itself into a site that is part portal, part shopping mall and part search machine. Its strategy is based on what Daniel Rosensweig, Yahooi's chief operating officer, calls the "desert island question": if you were stuck on a desert island and could have access to only one website, which one would it be? Abandoning Google, he says, gave Yahoo! a more differentiated product.

Yahoo! is also starting to integrate the results of its searches with other services it provides on its website. For instance, it recently launched a service called Smart-View that links searches with its online maps. This allows someone looking for a petrol station in San Francisco, for instance, to type in his location to get an interactive map with all the nearby petrol stations, and driving directions if required. Finding local information is becoming an area of hot competition.

Some people believe Microsoft could put a stranglehold on Google, as it did on Netscape in the battle to control the web-browser business. At the World Economic Forum earlier this year, Microsoft's founder, Bill Gates, admitted that so far Google had well and truly beaten his company in the search business. But Microsoft will try to leapfrog the existing search engines with its own technology and integrate its service within its own software, including its Office programs and the new version of Windows, known as Longhorn, due to appear in 2006. At present, searches carried out on Microsoft's MSN site are partly powered by Yahoo!’s search engine, but that relationship is likely to end once Microsoft introduces its own technology.

Windows runs more than 90% of the world's PCS, so this is bound to raise further antitrust concerns. As more computers become permanently plugged into high-speed internet connections, many more people will search directly without opening a web browser while working on a report or presentation. As with media players, the providers of rival search engines will be watching closely to see just how difficult Microsoft's new products will make life for them.

At present, search marketing is considered a relatively cheap and cost-effective method of finding customers, but there are only a finite number of search terms, says Kenneth Cassar, director of strategic analysis for Nielsen // Net Ratings. This means the price of popular search terms is bound to rise, which will encourage websites to find new places for context-based ads. Websites will also try to keep their exit barriers to users high, not least by making it more convenient to stay with them than to start again somewhere else, with all the hassle of filling in personal details and credit-card information.

The search business is still young, and could fragment into many different products for different purposes. That would provide opportunities for newcomers beside Microsoft. Ask Jeeves, for one, has become a slightly less distant third after improving its technology. And there are a number of smaller companies that could yet produce a breakthrough product with mass appeal, just as Google did when it operated out of a garage.

More specialised searches, such as those concentrating on web pages that match users' interests, will be a big area of development. Someone entering the word "tuning" on a car-related search, for instance, would no longer have to scroll past links about musical instruments, television stations and faster software to find pages that explain how to adjust car engines. Search sites could also "learn" about users' interests from the links that are clicked through, or users could be invited to provide their personal preferences. Google and Yahoo! have already gone some way down this route. Both, for instance, now operate news services that not only report the latest events but also allow users to search through thousands of publications to retrieve past articles.

Advertising helps pay for the internet's free services, such as search. To continue to get these things free, users may have to be prepared to accept ads. Gmail, a new free e-mail service which Google is testing, offers users more than 100 times the storage space of rival e-mail services, in return for agreeing to sponsored links being placed in their e-mails. Google's computers analyse the content of an e-mail and then dish up ads that seem appropriate.

III. Formulate 10 questions on the above text and find answers.

IV. Give a shot summery of the text.

V. Translate some computer terms:

Simple terms: anchor, wizard, versioning, relink, cipher, containment.
Compounds: clipboard, multithreaded, client-pull, design-time, runtime, polyline, turnkey, bitmapping, bandwidth.
Term collocations: frame-based layout, active template library, active server pages, asynchronous moniker, active data objects, connectable object, frequently asked question, hypertext markup language, hypertext transfer protocol, integrated development environment, interface definition language, Internet service provider, object linking and embedding, remote procedure call, software development kit, uniform data transfer.

VI. Put the proper words into sentences:

1. Please, don't ... me if you disagree with this.

2. The person who develops a ... lock for computer data will make a fortune.
3. … a person or computer program that searches the web for new links and link them to search engines.
4. … spends an excessive amount of time on the Internet.
5. Windows and Unix operating systems are going to be on the desktops and on servers in ... numbers. (B. Gates).
6. Hit a video button and … for a closer look.
7. … brings together different types of visual devices: text, pictures, sounds, animations, speech.
8. Each person handles … differently.
9. Good … on the Net tends to be clear, vigorous, witty and above all brief: short paragraphs, bulleted lists, one-liners – the units of thought.

---

multimedia, dominant, spider, netizen, flame, writing, foolproof, technostress, zoom.

LESSON VI

I. Read aloud, translate and memorize the following words and expressions:

to find a wider range of	in a single format
available only on subscription	a way of identifying trends
ranging from bulletin boards	an automated process
to allow more precise searches	data mining
to know in advance	heartening aspects

II. Read and translate in written:

Text ***WORTH PAYING FOR ?***

Those who want to avoid ads, find a wider range of useful information or make sophisticated searches on the internet are increasingly being asked to pay. Online newspapers and magazines are one example: the free searches provided by search engines often link to pages available only on subscription.

Even though so much information is available free, it can be worth paying to use a specialist search service, says Clare Hart, the boss of Factiva, a web-based news and business-information service. A joint-venture between Dow Jones and Reuters, it has around 1.6m paying subscribers and draws on almost 9,000 sources in 22 different languages, many of which are subscription-only.

The tools of the system are designed to allow more precise searches and to provide results in a single format.

Some companies use such services to provide virtual "clippings" – all the stories from newspapers and magazines that mention their firm or their product. But just think how much more valuable it would be to know in advance what might be written about you in future. A new type of search engine could get close with an automated process called data mining. WebFountain has been developed by IBM's research centre at Almaden, California, to use text analysis as a way of identifying trends, patterns and relationships from massive amounts of both unstructured and semi-structured text, ranging from bulletin boards, chat rooms, web logs, newspapers and trade journals.

Factiva has licensed the technology to provide a new reputation-management service, launched this month. The idea, explains Ms Hart, is that, say, a brand manager will be able to see how his company is being perceived on the internet without having to keep checking hundreds of different sites, some of which he may not even know about. This could provide an early indication of trends and troubles.

Companies could also use such services to find out what their rivals are up to. Nor would they have to be big and powerful to do so. One of the most heartening aspects of e-commerce is that the little guys often have the edge.

III. Formulate 10 questions on the above text and find answers.

IV. Give a shot summery of the text.

V. Translate the following sentences:

1. Ось схема рішення цієї задачі.
2. Сучасний комп'ютер здатен здійснювати мільйони логічних операцій на хвилину.
3. Фільм, який ти мені вчора дав, займає 653 мегабайти. Я вважаю, він вміститься на звичайний компакт диск.
4. Приставка re- в англійській мові означає виконувати будь-яку дію знову.
5. Цей підручник мені зрозумілий. Тут багато корисної інформації для програмістів.
6. Ці файли є у комп'ютері. Треба їх зберегти.

VI. Read and discuss the following text:

TO YOUR HEALTH

Can all this computing be good for you? Are there any unhealthy side effects? The computer seems harmless enough. How bad can it be, sitting in a padded chair in a climate-controlled office?

Health questions have been raised by the people who sit all day in front of the video display terminals (VDTs) of their computers. Are computer users getting bad radiation? What about eyestrain? And what about the age-old back problem, updated with new concerns about worker who hold their hands over a keyboard? What about repetitive-action injury also known as carpal tunnel syndrome? What about the risk of miscarriage?

Unions and legislators in many communities continue to push for laws limiting exposure to video screens. Many manufacturers now offer screens with built-in protection.

Meanwhile, there are a number of things workers can do to take care of themselves. A good place to begin is with an ergonomically designed workstation. Ergonomics is the study of human factors related to computers. A properly designed workstation takes a variety of factors into account, such as the distance from the eyes to the eyes to the screen and the angle of the arms and wrists.

Experts recommend these steps as coping mechanisms:

- Turn the screen away from the window to reduce glare, and cover you screen with a glare deflector. Turn off overhead light; illuminate you work area with a lamp.
- Put your monitor on a tilt- and- swivel base.
- Get a pneumatically adjustable chair. Position the seat back so your lower back is supported.
- Place the keyboard low enough to avoid arm and wrist fatigue. Do not bend your wrist rest. Do not rest your wrists on a sharp edge.
- Sit with your feet firmly on the floor.
- Exercise at your desk occasionally rotating your wrist, rolling your shoulders, and stretching. Better yet, get up and walk around at regular intervals.

LESSON VII

I. Read aloud, translate and memorize the following words and expressions:

establishing a merchant account	huge scope
online tracking facilities	split the revenue
to resemble each other	careful analysis
credit-card payments	to be represented at board level

to match the content of a website the ability

II. Read and translate in written:

Text ***UNLIMITED OPPORTUNITIES***

The internet offers huge scope for both business and leisure, but security urgently needs to be improved

There has never been a better time to start a business, especially an e-business. The internet has dramatically reduced the cost of setting up, and especially of reaching customers. For about $1,000, you can buy a personal computer. A high-speed internet connection with enough space for a good website will cost around $40 a month. Marketing costs, provided you have something interesting to sell, could amount to bidding a few cents for a search-engine keyword. For a commission, sites such as eBay and Amazon will also list your wares. PayPal will look after credit-card payments, saving you the bother of establishing a merchant account. And firms such as ups will deliver anywhere, and provide online tracking facilities for checking how far a parcel has got.

All over the world, people have begun businesses this way. They might be selling avatars (virtual personas for online gaming) in South Korea; tribal carvings in South Africa; model steam-engine parts in Germany; or classic Corvettes in California. Web publishing too can now more easily be supported by advertising. Some online companies will find and place ads on your website for you, and split the revenue. Google's AdSense service, for instance, uses the search engine's technology automatically to match the content of a website with appropriate text-based ads. The more popular a site becomes, the higher the income.

E-commerce could yet turn into one of the biggest business start-up schemes ever. In a recent study, eBay found some 430,000 people in America alone who now make a full-time living or earn a substantial secondary income from trading on its site. Every year eBay holds a big get-together for its army of online entrepreneurs. Google, too, knows plenty of people who have profited from ads placed on their website.

From hobby to business

During the height of the dotcom boom, websites put together by enthusiasts, hobbyists or collectors were seen as fringe activities with no profit potential. Yet such people often know their subject very well, and use the internet for what it is extremely good at: finding others with similar interests and passions. Many of them have discovered sufficient numbers of like-minded people to encourage them to set up small businesses – and sometimes not-so-small ones: eBay, started by Pierre Omidyar in the time-honoured fashion on a computer in his bedroom, began as a trading platform for collectibles.

High-speed internet connections boost online activity all round, as demonstrated by South Korea, where some two-thirds of households have broadband. A study by Forrester showed that in Europe subscribers with broadband use their computers to do more than twice as many things online as consumers with slower internet connections. They also tend to do different things, such as downloading more movies and music files. And they publish many more web pages.

The most commonly found ingredient in commercially successful websites, apart from original ideas, is careful analysis of how people use the site. That information can be used to develop additional services which make the site even more attractive to users. These dynamics are expressed in complex mathematical formulae which are increasingly seen as a strategic asset. The people in charge of the sums are beginning to be represented at board level. Amazon, for one, has appointed its first chief algorithms officer.

By growing organically, commercial websites tend to develop loyal followers. Obitz's Jeffrey Katz likens these groups of users to "cults of internet behaviour". They may be eBayers, Yahoo! addicts or devotees of craigslist, a non-profit site providing networking, goods for sale, jobs and other links in different cities. Many people now organise their online lives around their favourite sites, in much the same way as people used to visit their favourite shops in the high street. As retailers have consolidated, giant out-of-town stores have put many of the smaller shops out of business and now threaten some department stores. "In the era of Wal-Mart, main street doesn't exist any more," says Google's Sheryl Sandberg. But you can still find something like it online. Moreover, as she points out, small traders can still get into business from a PC in their bedroom.

But will retail power on the web eventually become consolidated too? So far, Barry Diller's IAC is the closest thing to an internet conglomerate. Last year its net revenue was $6.3 billion. Already its various websites are able to sell such disparate things as a holiday to Miami, an introduction to a new girlfriend when you get there, an engagement ring, a wedding package, a new home and a mortgage to help the couple pay for it all.

So far, the group's various sites still operate largely as independent companies. They include IAC's online travel agents, such as expedia.com,

hotwire.com and ho-tels.com; electronic retailing (including the televised and website services of Home Shopping Network); Ticketmaster; local, entertainment and personal services (including match.com); and financial services (such as lendingtree.com). Mr Diller says he does not believe in forcing synergies. He is leaving his e-commerce businesses alone so they can concentrate on becoming market leaders in their different segments. Some of these, he says, are still at an early stage of development. "We do think there's a stage two," he adds. "Many of our properties very naturally relate to each other." So will there be more cross-selling and combined branding? Perhaps, but only in good time, says Mr Diller.

Amazon, eBay and Yahoo!, in their own ways, are also building conglomerates where all sorts of goods and services can be found. In the process, they are starting to resemble each other. But it remains to be seen if anyone can build an online version of Wal-Mart that could ruthlessly drive down costs. Many hotels have already rebelled against large online reservation services by promoting their own sites. On the internet, it is easy for suppliers to start selling directly because they do not need a store to operate from.

Even walmart.com does not seem to be considered particularly threatening by most other e-businesses, perhaps because creating a virtual superstore is not in itself enough to make much of a difference. The real power of e-commerce is not just the ability to buy things online and have them delivered, but how it can change the way people live and work.

III. Formulate 10 questions on the above text and find answers.

IV. Give a shot summery of the text.

V. Insert the correct words:

SURFING THE NET

What is more impressive than the pyramids, more beautiful than Michelangelo's paintings and more important to . . . . . than the wondrous inventions of the Industrial Revolution? To the converted, there can be only one answer: the Internet that undisciplined radical electronic communications network that is shaping our universe. Multimedia, the electronic publishing revolution, is entering every area of our lives – college, work and home. This new . . . . . combines texts, video, sound and graphics to produce, ... language learning, football, music, movies, cookery and anything else you might be . . . . . .

The industrial age has matured into the information age wherein the means . . . . . ., manipulate, and use information has become . . . . . to success

and power. The electronic superhighway provides an entry to libraries, research institutions, databases art galleries, census bureaus, etc. For those of us interested in intercultural communications . . . . . is a universal community, with instant access not only to . . . . . anywhere, but also to friends old and new around the globe.

The Internet is an amorphous global network of thousand of linked computers that pass information back and forth. While the Internet has no government, no owners, no time, no place, no country, it definitely has a culture, which frequently approaches anarchy; and it has a language, which is more or less English. People who . . . . . in an Internet environment know how addresses are formed, how to use e-mail, ftp, Usenet News, Telnet, and other software tools.

The cornerstone of an economy are land, labor, capital and entrepreneurial spirit. That traditional definition is now being challenged. Today you find a fifth key economic element: . . . . . As we evolve from an industrial to an information society, our jobs are changing from physical to mental labor. Just as people moved physically from farms to factories in the Industrial age, so today people are shifting muscle power to brain power in a low, computer-based, ... by the Internet society.

---

digital technology, interactive, Cyberspace, to access, information, interact, crucial, mankind, interested in, globally linked, information dominant.

LESSON VIII

I. Read aloud, translate and memorize the following words and expressions:

to be restricted	assuming
personal data	an obstructive activity
cause a huge backlash	to persuade
to participate	to combat cybercrime
to deal with inquiries	due to glaring errors and omissions

II. Read and translate in written:

Text ***A NEW LIFE***

"In 2001 it was unimaginable to think that by 2004 I would not have to leave home any more and, short of needing surgery, could get everything I want

from a combination of e-mail and websites," says Marian Salzman, chief strategy officer for Euro RSCG Worldwide, a big advertising agency. Based in New York, she believes more people will use the internet to work from home, either running their own businesses or teleworking for companies. For example, instead of outsourcing more call centres to India or other developing countries, companies might employ people in America or Europe who have good practical knowledge of products or services and can deal with inquiries from home.

However, not everyone has a computer at home, and some people may never get one. "The internet is wildly empowering for people who want to participate, but they are part of a digital elite," says Ms Salzman. So the 24% of households in America that have no internet connection are missing out on many things, not least information on products and prices. Perhaps another generation, familiar with computers from school, will have to grow up before that changes.

Meanwhile, conducting business online will continue to get easier. Microsoft, for one, is working hard on all manner of B2B applications, including some that will allow its Office suite of programs to be closely integrated with e-commerce activities. This will help small and medium-sized businesses, many of which work together in "business ecosystems", says Charles Fitzgerald, a senior Microsoft manager. In the future, he adds, groups of companies will increasingly use systems that pull together the information held in different parts of their organization.

Consumers should expect something similar to happen. In the near future, an online shopping service could make recommendations on the basis of personal information, such as checking the diaries people keep on their computers (provided they have given their permission). For instance, a customer might get an e-mail reminding him that it is his mother-in-law's birthday next week, along with a suggestion for a present, plus a note of what he sent last year. One click, and the present could be ordered and dispatched.

Microsoft is already building the necessary tools for such services into its next generation of software. Mr Fitzgerald stresses that the model would be "permission-based": customers would first have to agree to give sites access to their personal information. If they think the services are useful, some of them may well do so. But others already feel that spam, computer viruses, fraud and the theft of personal data are making the internet a dangerous place, and that access to their computers needs to be restricted, not opened up.

A strong economic incentive may well persuade some people to part with more information about themselves, but any abuse would cause a huge backlash. Much irritation has already been caused by aggressive internet marketing, such as persistent pop-up ads, says Hal Varian, professor of information management at the University of California at Berkeley (and an adviser to Google). Nor, he adds, do people much like "bait-and-switch" tactics, used by some traders to make their prices look attractive in shopping-comparison searches. Having lured

a customer to their site, the trader will try to switch the buyer to a more expensive item.

Of course, caveat emptor applies as much online as its does offline. But abuses on the internet are not confined to sharp practice: criminals also use the web for much nastier things. Reliable numbers are hard to come by, not least because people would rather not admit to having been defrauded, nor do websites welcome publicity about crime. But there is plenty of evidence that all sorts of scams flourish on the internet, from identity theft to phoney auctions and bogus requests for data. Companies have to work hard to stay ahead of criminals.

eBay's Rajiv Dutta insists that the share of problem transactions on his company's site is very low. Users are more likely to have their credit-card information stolen in a local shopping mall than on his website, he reckons. Still, eBay employs some 800 people around the world to police its auctions. Other sites also watch out for suspicious activity, most recently from criminal internet traders based in east European countries.

Last year, losses of some $200m were reported to America's Federal Trade Commission. Nearly half the complaints involved online auctions. According to some analysts, 2003 was perhaps the worst year on the internet so far for criminal and obstructive activity, such as virus attacks. This has to be brought under control, or else consumers will retreat. Crime may yet prove the biggest threat to the development of e-commerce.

A measured response

It is the internet's very openness that makes contact between buyers and sellers so easy and potentially so rewarding. And just as it would not have made sense to shut up the high street because it harboured some thieves and rogues, it would make no sense to combat cybercrime by stopping all internet commerce – even assuming it could be done. But better locks and security systems are urgently needed. And at least some of the problems are due to glaring errors and omissions by software companies and firms that build websites and manage internet connections.

For most people, most of the time, the internet is a great place in which to go exploring, to buy, to sell and to make a living. But a more secure environment would make it better still.

III. Formulate 10 questions on the above text and find answers.

IV. Give a shot summery of the text.

V. Read and discuss the text:

WHOM TO BLAME AND WHAT TO DO?

As computing and communications become irreplaceable tools of modern society, one fundamental principle emerges: the greater the benefits these systems bring to our well-being and quality of life, the greater the potential for harm when they fail to perform their functions or perform them incorrectly. Consider air, rail, and automobile traffic control; emergency response systems, and, most of all, our rapidly growing dependence on health care delivery via high-performance computing and communications. When these systems fail, lives and fortunes may be lost.

At the same time, threats to dependable operations are grooving in scope and severity. Leftover design faults (bugs and glitches) cause system crashes during peak demands, resulting in service disruptions and financial losses. Computer systems suffer stability problems due to unforeseen interactions of overlapping fault events and mismatched defense mechanisms.

Hackers and criminally minded individuals invade systems, causing disruptions, misuse, and damage accidents that result in breaking several communications links, affecting entire regions. Finally, we face the possibility of systems damage by "info terrorists".

Fault tolerance is our best guarantee that high confidence systems will not betray the intentions of their builders and the trust of their users by succumbing to physical, design or human-machine interaction faults, or by allowing viruses and malicious acts to disrupt essential services.

As the computing sciences move rapidly toward "professionalization" the new topic must be incorporated into the curriculum – ethics, i.e. professional ethical behavior. Computer professionals are experts in their field with up-to-date knowledge that they can effectively and consequently apply in product development. They are also responsible to the product's users and must understand the effects of their decisions and actions on the public at large.

Professionals are responsible for designing and developing products, which avoid failures that might lead to losses, cause physical harm, or compromise national or company security. With so much info flowing across the Internet and because of the rising popularity of applets and similar modular applications, it is vital for the professionals to take responsibility in maintaining high standards for the products they develop.

VI. Topics for Essays, Oral or Written Reports:

1. Which of user identifications is best?
2. Common means of protecting data:
   - securing waste;
   - separating employee functions;

- implementing passwords, internal controls, audit checks.

3. Cryptography.
4. Copy protection.
5. What are computer Viruses and how do they differ?
6. What makes a perfect virus?
7. A day in the life of the virus hunter.
8. Professional ethical behavior.
9. How much has technology changed in just the last 20 years?
10. The main problems of the e-mail: opinions and facts.

МЕТОДИЧНІ ВКАЗІВКИ
для СРС та навчальний матеріал
з англійської мови
для студентів ІІІ курсу
денної форми навчання
Напрям підготовки – „Комп'ютерні науки"

Укладач: к.ф.н., доц. Шотова-Ніколенко Г. В., Одеса: ОДЕКУ, 2008 р., 32с.

Підп. до друку Формат Папір офсетний
Умовн. друк. арк. 2 Тираж 100 Зам. №
Надруковано з готового оригінал-макету
Одеський державний екологічний університет
65016, Одеса, вул. Львівська, 15