

Региональный этап Всероссийской олимпиады профессионального мастерства среди обучающихся по специальностям среднего профессионального образования (УГС 09.00.00 Информатика и вычислительная техника)

Конкурсное задание I уровня: перевод профессионального текста

Время на выполнение задания: **60 минут**

Допустимо использовать расположенный D:\00\Словарь.pdf Современный англо-русский словарь компьютерных технологий. – М.: Бук-пресс, 2006. – 528 с. (PDF)

Задача 1. Выполните перевод предложенного текста (ответ оформляется средствами текстового редактора пакета Office 2013 Professional Plus).

Задача 2. Ответьте на поставленные вопросы (ответ оформляется средствами текстового редактора пакета Office 2013 Professional Plus в том же документе что и перевод).

Задача 3. Распечатайте результат в 3х экземплярах. В правом верхнем углу каждого экземпляра проставьте номер участника полученный при жеребьевке.

Broadband Communications

Integrated Services Digital Network (ISDN)

ISDN services can be carried over existing telephone network infrastructure to terminal adapters (TAs) in the client machine. A common ISDN interface standard has a digital communications line consisting of three independent channels: two Bearer (B) channels, each at 64Kbit/s, and one Data (D) channel at 16Kbit/s. The D channel is used to carry signalling and supervisory information to the network, while the B channels carry the data and can be linked to provide a 128Kbit/s data channel.

Wireless connections

The wireless alternatives come in two forms: satellite and cellular. Satellite systems require the use of a modem to maintain the upload. Downstream bandwidth is provided via a dedicated satellite dish, connector hardware and proprietary software. Cellular systems use assigned radio frequencies and are based around a network of transmitters that are arranged in a cellular network, much like cellular mobile phone systems.

The cable alternative

Cable companies can also offer affordable broadband services over copper coaxial or fibre infrastructure networks. The connection is shared by several customers on a branch, so actual connection rates are variable, unlike ISDN and DSL.

Digital Subscriber Line (DSL)

DSL technology capitalises on the existing network of copper infrastructure, but allows digital signals to be carried rather than analogue. It allows the full bandwidth of the copper twisted-pair telephone cabling to be utilised. With splitter-based services, the DSL signal is pulled out from the phone line as it enters your premises and is wired separately to a DSL modem. This involves additional hardware and installation by the service provider at the customer site. The shielded option involves no installation, but the telephone company's equipment and some of your equipment might need upgrading. With Asymmetric Digital Subscriber Line (ADSL), most of the duplex bandwidth is devoted to the downstream direction, with only a small proportion of bandwidth being available for upstream. Much Internet traffic through the client's connection, such as Web browsing, downloads and video streaming, needs high downstream bandwidth, but user requests and responses are less significant and therefore require less on the upstream. In addition, a small proportion of the downstream bandwidth can be devoted to voice rather than

data, allowing you to hold phone conversations without requiring a separate line. DSL-based services are a very low-cost option when compared to other solutions offering similar bandwidth, so they can be made available to the customer at extremely competitive prices.

Questions:

- 1 How many channels does an ISDN system commonly use?
- 2 What types of wireless systems are named in the text?
- 3 What do PCs connected to a satellite system use to send data?
- 4 What types of cables are used in cable network systems?
- 5 What may need to be upgraded when using a shielded DSL system?