THE INTERNET

B.V. Holyshevsky – Sumy State University, group IN-01

I.A. Bashlak – E L Adviser

On 29 October 1969, Charley Kline, a student in the Network Measurement Center at the University of California, sent the first ever message from one computer to another on the ARPANET. That day is the birthday of the Internet.

The Internet is a global system of interconnected computer networks that use the standard Internet protocol suite (TCP/IP) to serve billions of users worldwide. It is a network of networks that consists of millions of private, public, academic, business, and government networks, of local to global scope, that are linked by a broad array of electronic, wireless and optical networking technologies.

The Internet is growing rapidly, from 2000 to 2011, the number of Internet users globally rose from 361 million to 2.267 billion. This means that every day a little more than 2 billion people use the Internet.

In 2010 global Internet traffic amounts 14,984 petabytes per month or 6,062 gigabytes per second. It's the same as the transfer of 1,290 DVD discs every second.

Any system needs energy. How much energy is used the Internet? Researchers at the University of California, estimate that the internet consumes between 170 and 307 GW. So the internet is responsible for less than 2 percent of the energy used by humanity.

From the above it can be concluded that on average, for the transfer of 1 Mb of information require 38,663 joule of energy. To download DVD movie from the Internet you need to burn about 8.5 kilograms of coal.

The Internet has no centralized governance in either technological implementation or policies for access and usage, each constituent network sets its own standards.