Application Network Communication

The growth of the internet economy is driven by the innovations in information and communication technology (ICT) sector, and ICT companies play a leading role among research and development running companies (R & D). In the private sphere, the interactive Web 2.0 services, social networks and streaming technology (eg radio streams, video streams, such as YouTube, video on demand, or other data streams such as online games, etc.) are particularly growing in popularity. The annual report on "Cisco Visual Networking Index (VNI) Forecast and Methodology, 2008 - 2013" [3] predicts an increase in global IP data traffic by five times up to 56 exabytes of bandwidth a month. This growth represents a continuing increase in demand for bandwidth equivalent of 40 % annually starting in 2008, about nine exabytes/month (an Exabyte/EB are 1,000 petabytes/PB 1 PB are 1,000 terabytes/GB). For Germany, the Cisco VNI Forecast predicts a rise of about 0.5 exabytes/month in 2008 (home users : 0.35 exabytes) to over 2.5 exabytes/month in 2013 (home users : 1.5 exabytes). In Western Europe, the IP traffic in four years will generally rise up to 12.5 exabytes/month, which is just behind North America with 13 exabytes.

read moreOur modern information society is based on powerful broadband data communication networks. Communication networks are thus a key factor - in international, national and regional competition of location. The OECD [1] estimates that by 2011 the broadband data communications will be contributing one third of the productivity growth of highly developed states [cited 2009]. Even today, it is observed that companies integrate new forms of communication into their processes worldwide.

The ICT generate a decisive impetus for a "green growth" in all sectors of the economy and provide means of addressing environmental challenges and climate change.

In terms of energy use, the material throughput and the treatment at the end of life cycle ICT has a substantial and direct effect on the environment. The contribution of a single PC to the warming of the atmosphere is at its highest during its use phase, but also occur during its production and disposal phase of significant effects. Better R & D and product design can influence the impact throughout the lifecycle and public policies with the aim of ecologically ICT use can foster the entire life cycle. [2]

The OECD lists the following as important ICT policy for economic recovery
[as from November 2010] [2]:

  - ICT skills and employment
  - Broadband
  - R&D programmes
  - Venture finance
  - Enabling environmental impacts of ICTs

The 10 most important and long-term policies of treatment are:
[as from November 2010] [2]:

- (1) Security of information systems and networks
- (2) Broadband
- (3) R&D programmes
- (4) Government on line, government as model users
- (5) Innovation networks and clusters
- (6) ICT skills and employment
- (7) Digital content
- (8) Consumer protection
- (9) Technology diffusion to businesses
- (10) Technology diffusion to individuals and households

Sources:
[1] http://www.tecchannel.de/kommunikation/extra/2021041/breitbandausbau_in_deutschland/ [1]

[2] http://www.oecd.org/dataoecd/31/59/46559738.pdf [2]

[3] http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-481360_ns827_Networking_Solutions_White_Paper.html [3]

[4] http://de.wikipedia.org/wiki/Green_IT [4]

Organisations

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[4] http://de.wikipedia.org/wiki/Green_IT