

Computer Networking – Assignment 1

School of Informatics
University of Edinburgh

Issued on 19th September, 2011

The aim of this assignment is for you to write a technical report on *the impact of all-IP networks on convergence in the Telecommunications industry*.

The telecommunications industry is undergoing rapid transformation thanks to the emergence of the “converged” all-IP networks. Seemingly separate industries – the telephone operators, the internet service providers, and the cable-TV companies find themselves competing in the same sphere. The term “quadruple play” is used to describe offerings which combine fixed and mobile telephony, broadband internet access, and multichannel television.

Your task is to describe the technical aspects of this convergence for the four services listed above, detailing the protocols and software used. The length of the report should be about 15 pages, excluding references, and organised in the following sections: the *Introduction* (~ 1 page) section should describe your understanding of convergence in the telecommunications industry; the *Technology* section (~ 13 pages) should describe the technical aspects of the protocols and software which enable the convergence of the four services, and any existing or emerging standards; and the *Conclusions* section (~ 1 page) should give an indication of likely future trends in convergence.

The intended audience of the report is a reader with basic knowledge of computer networking, and wishes to learn more about this area. Particular attention should be paid to citing useful references, so that the interested reader can find out more about a particular protocol or standard.

The report must be your own work; no collaboration is permitted. Remember to reference all sources, including websites and do not quote sources verbatim – use your own words.

Submission: The deadline for submission of the printed version of the report at the ITO is **4pm, 20th October, 2011**. A postscript (pdf) version of the electronic copy of the report should also be emailed to dka@inf.ed.ac.uk with “CN Assignment” in the subject line of the email.

Assessment:

Majority of the marks will be awarded for demonstration of good research in the topic: complete and accurate coverage of the relevant protocols and quality of the cited sources. The report should be well structured and clearly written.