

In this work we do a study of the BitTorrent protocol, used to share files over peer-to-peer networks, and the present-day video-transfer systems by streaming. The objective is to design a new streaming system able to work in peer-to-peer environments, based in the BitTorrent protocol. In this way we are going to implement a small application to achieve simulations about this system – we have called it BitStream – function, and evaluate its viability thinking in a future use of it.

A streaming system like this will permit a reduction of the capacity requirements of the servers which, nowadays, thanks to the increment of the users of the Internet and the growing number of network multimedia applications, not always are capable to proportionate their services to all the users who request them. Furthermore, the system will be able to proportionate service to more users, who will collaborate in the broadcasting of the data. Indeed, this work will be structured in three sections, which firstly comes the study of BitTorrent and streaming systems, the design of the BitStream system in a second section, and finally, the description of the implemented application. In this third section, the most interesting one, we describe its functionality and the results obtained in the simulations. It is not our purpose to create an application to set aside a real use, but establish the guide line thinking in a future use of this system, paying a special attention to the results of the simulations.