DEVELOPING A MONITORING SYSTEM FOR P2P MULTIMEDIA STREAMING

Background

Irdeto is a world leader in content security, and provides comprehensive solutions for digital content protection in digital TV, IPTV and mobile environments. The company's support, sales and R&D offices are located worldwide with corporate headquarters near Amsterdam, the Netherlands. The company works with an impressive list of leading industry partners to create end-to-end solutions for any pay-media business.

Irdeto is offering a research topic in the area of P2P networking, traffic monitoring and multimedia streaming. Nowadays, many multimedia distribution solutions use the principles of P2P communication. Unlike in centralised solutions, gathering data in P2P networks for audience analysis can be a challenging task, especially for proprietary protocols and private communities. The purpose of the project is to implement tools that can perform measurements of multimedia and control data traffic of an arbitrary P2P system, and to provide data measurements that may assist in understanding the system model and in analysis the system's audience.

Goals and task

The research project must result in a) the study of the existing P2P multimedia streaming systems (with the focus on the most popular solutions); b) implementation of a monitoring system for a P2P streaming; c) a traffic analysis.

Cooperation

The work will be done within the Irdeto R&D department in Eindhoven.

Pre-requisites

The expertise required and desired are as follows:
- Expertise in C/C++/C# is highly required
- Knowledge of network protocols is desired
- Knowledge of multimedia is desired

Planning (time frame & supervisor)

Dr. Dmitri Jarnikov will supervise the project.
The student will:
1. study existing P2P multimedia streaming systems
2. design and implement traffic monitoring tools for a P2P streaming system
3. perform measurements and analysis of the traffic

Status (who is doing the project; maybe a pointer to recent info)

We are seeking enthusiastic students interested in working on this project for 6 months. If the student desires, the work could be used as part of his/her Master's thesis/project.