Application-Independent Information Infrastructure (AI3): Design and Implementation

**ABSTRACT**

Recent development of ICN technologies mostly focused on data caching, and data publication and subscription to improve the efficiency of data transmission. The issues of monopoly of users’ data and social relations by ASPs (Application Service Provider) have been ignored. This monopoly causes some problems such as the hijack of users by a handful of giant ASPs, users’ publication of data only limited within an ASP, and fragmentation of users’ social relations in multiple ASPs. In this paper, we propose a new network architecture, called Application Independent Information Infrastructure (AI3). AI3 has features of decoupling users’ data from ASPs and decoupling users’ social relations from ASPs. AI3 has an open structure that allows all ASPs to access the services and information provided by AI3, and facilitates the interoperation between multiple AI3 domains. We also designed a uniform security mechanism to protect users’ data stored in AI3, and users’ privacy for data publication and subscription across different AI3 domains.

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All are welcome!