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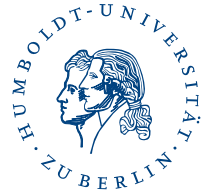**Joint Report**

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Detailed Design: Anonymous Reputation Management for File Sharing (ARM4FS)

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Abstract:

The arising structures of Social Networks Services create masses of new content with great differences regarding their quality. Users are often overwhelmed by the amount of content and need help to decide which content (or generally which resources) to use/consume. Reputation systems are a technology with the potential to resolve this problem. A key issue within this context is privacy, which is critical to the acceptance of new Services, so reputation systems of the future should be able to incorporate the protection of privacy.

We propose an architectural design which fulfills these requirements with respect to the user's anonymity and privacy. We do this in an example case of a file sharing system, for which a Reputation Management System is developed. The proposed design provides a clear separation of information about the quality of the content and its origin. This document presents the components overview and a detailed description of their functionality. The used communication protocols and data structures are explained.

Keywords: Social Network Services (SNS), Web 2.0, Security, Anonymization, Reputation Management, File Sharing, EigenTrust.

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