A User-Friendly Deployment System for Digital Certificates

With the TUM Secure E-Mail project, we have the goal to improve security and confidentiality of e-mail communication at TUM. The vision is to equip all students, researchers and administrative staff with digital S/MIME and OpenPGP certificates to enable authenticated, integrity protected and confidential communication between internal and external communication partners.

With today's approaches to secure e-mail communication, one of the main challenges is to provide an intuitive and easy to use solution for end users to obtain, install and use such certificates.

The goal of this thesis is to create an easy-to-use, extensible application focusing on the requirements of technically less experienced users to enable users to use digital certificates for secure e-mail communication in their everyday lives. This application has to focus on key generation and certification requests, obtaining certificates from the certification service and detect and configure client applications to use these certificates.

- Analyze requirements and processes
- Create and propose an architecture
- Implement and test your idea with a strong focus on usability and security

- Passion and a good portion of curiosity
- You are aware of things like OpenPGP, S/MIME and X.509
- You did some coding before and you liked it
- You like to create and realize software architectures

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