eIDAS eID & eSignature for HEI/EDU Applications

Abstract

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1. Summary

Further use cases at HEI/EDU management were implemented as combined eIDAS eID & eSignature [2,3] based hybrid web accounts & applications to support cross boarder/domain usage & mobility (EU) for students and researchers as well as for study applicants for enrollment/eDiploma together with SfH in the EU CEF project StudIES+ (formerly TREATS[1]). The project StudIES+ is funded by EU CEF program 2015, project "TREATS - Trans-European Authentication Services" [6], Action No. 2015-DE-IA-0065. An insight look to ongoing work by the EU CEF 2017 funded project StudIES[2] is given (Student's identification and electronic signature services [5,6,7,9]), Action No. 2017-DE-IA-0022 (the projects are co-financed by the local government of Saxony-Anhalt (MW)), especially to the eNotar services/platforms for multiparty signing & notarization use cases like eDiploma/eTOR at HEI/EDU.

2. eIDAS extensions for HEI/EDU Apps by hybrid eID/ID & eSignature

For all applications, the according university LDAP database was extended to a hybrid eIDAS eID/legacy ID based permanent student account, with additional academic attributes in StudIES+. The former document signing function in all applications used the German Tele-Signatur (unchanged), but it is extendable to use eIDAS eSignature in the future (ongoing work). The eIDAS extended applications have been connected successfully to the Governikus eIDAS eID (test) middleware infrastructure and to the eID test infrastructure in Austria (tested successfully). For all use cases, at first the users have to register themselves at the application. During the registration process, the user is identified in the university LDAP database by the eIDAS eID data and the user pseudonym and the eIDAS eID data are stored in the local database. After the registration, each application can be used only by entering the login process. This solution would enable not only HEIs like universities to digitize and optimize their application process for studies. Every organization having an application process where

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[1] TREATS Partners: Governikus (lead), Bundesdruckerei, MTG, Openlimit, AKDB, HS-Harz, sixform, HSH
[2] StudIES+ Partners: Francotyp-Postalia (lead), Bundesdruckerei, FU Berlin, HS-Harz, sixform

authenticated diplomas are an essential input would have an enormous benefit out of this solution (like SfH). SfH pursues two tasks of services for the admission to study at German non-private colleges and universities on behalf of the German federal states. Its first and "original" task is to allocate university places in courses of study with nationwide admission restriction (in Germany that are courses of study for medicine, veterinary medicine, dentistry and pharmacy). Additionally it operates a service procedure for local admission restricted courses of study (also called dialogue-oriented service procedure - in German: „DoSV"). In its "original" task SfH has to check content and sufficiency of the submitted documents, especially the university entrance certificate – the "diplomas". Due to the fact that normally that documents does not exist in digital (and authenticated) form in Germany, there is a lot of paperwork and still a lot of broken lines in the cooperation between the different digital and non-digital processes at SfH. To optimize these processes and to make them more efficient SfH already started to exchange digital diplomas with other countries [8]. But what SfH really needs to optimize their processes are also German diplomas as

- Scan of the original document (as PDF) & signed notarization
- Plain data like grade, name of certifying org., date of certification, type of qualification etc. e.g. in XML/ELMO [4]) to make that data computable within the process.

Getting that prototype SfH will be able at least to test that optimization and digitizing of its application and verification process (ongoing integration of EMREX and ELMO attributes).

3. HEI/EDU Use Cases & Architectures for Distributed Signing & Notarization

At HS Harz in coop. with SfH an eNOTAR prototype for eIDAS remote signing / notarization of A-Level certificates is going for implementation (StudIES+), where the candidates register & login at permanent eID/ID based accounts, asking for the notarization & then authorizing the school to load up the certificate to SfH for notarization (by law (DE)/GDPR; ELMO format), then stored in a temporary diploma register (federated architecture). Via EMREX [4] the candidate is able to access the notarized certificate for applications at SfH or HEI/employers (Fig. 1).
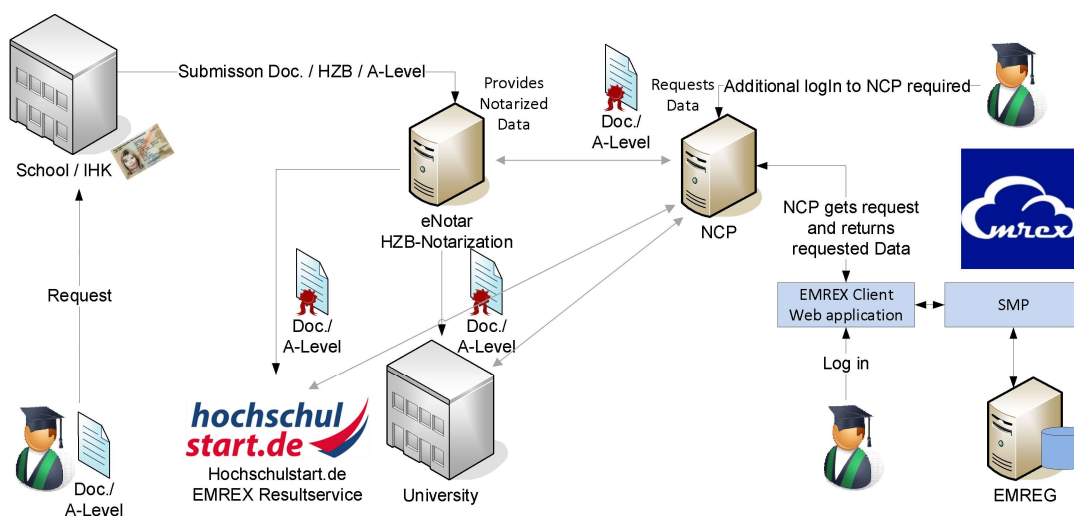

Figure 1: eNotar integration for SfH application process - overview

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