



# CASE STUDY

## Secure Digital Diplomas Using emSigner

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# A Reputed Private Sector University in Latin America Issues Secure e-Diplomas Using emSigner

eMudhra brings in convenience, efficiency and top-of-the-line security into the process of issuing digital diplomas for one of the largest private sector universities in Latin America.

### Industry

Education

### Business Matters

One of the largest private sector universities in Latin America with over 20,000 students dematerialized and automated the issuance of certified diplomas and certificates by using emSigner.

### Business Needs

The university was extremely concerned about the growing trend of diploma fraud in the LATAM region. Hence they wanted to take the digital plunge and start issuing e-diplomas that not only prevented diploma frauds, but also give the liberty to students to share and validate the authenticity of diplomas from anywhere, anytime.

### Approach

Deploy an on-premise or enterprise cloud hosted paperless solution to generate digital diplomas and provide provisions to electronically sign them using certificates generated by local Certificate Authority (CA) or eMudhra's globally trusted certificates, thereby making these smart diplomas legally binding and guarantee authenticity along with integrity.



### Background

The prestigious education institution in Colombia that was renowned for its academic excellence and innovation wanted to take the lead and show the other universities in the region the way to tackle the menace of diploma frauds. Along the way they wanted to give greater convenience to students by giving them the liberty to share and validate the authenticity of transcripts or diplomas from anywhere, anytime. After much deliberation, they decided that best way to achieve this objective was to go digital.

eMudhra outlined the following key areas where emSigner would significantly improve and streamline the certificate issuing process of the university:

- Pull data from any server and feed them into a document creation engine to generate digital diplomas in bulk
- Once this is done, add a level of authenticity and integrity to these certificates by validating them by using digital signatures issued by a local Certificate Authority (CA) or eMudhra's globally trusted certificates — by using bulk, multi-party and HSM based signing options
- Embed a secure QR code in the e-diplomas, which can be used by anyone to verify the authenticity of digital diplomas (via a QR reader for online verification or emSigner app for offline verification)



## Digital Signature Technology

The Digital Signature technology works on the Public Key Infrastructure framework which uses a Cryptographic Key Pair — Private and Public Key — for secure access and transmission of Information.

Digital Signatures are generated by the issuer for the client in a secure device.

### Benefits

The university reaped in significant benefits by issuing digital diplomas and authenticating them in bulk using e-signatures. This includes:

- Completely eliminate chances of diploma fraud
- Reduce diploma generation to issuance cycle time
- Better compliance as a result of complete traceability of certificates for audit purposes
- Tracking real-time statuses of signature progress happening on certificates initiated for signing
- Faster turnaround time, increased employees efficiency, productivity and transparency



### Solution

**eMudhra implemented emSigner to enable PKI based workflows for following:**

- Feed the data from Web Services API of the university system to emSigner
- Map the data to diploma template(s) created in emSigner
- Generate e-diplomas in bulk
- Send the e-diplomas in bulk for review and signing process (this process can be customized to support serial, parallel and bulk signing options)
- Once all members sign the document using a document signer certificate, the system issues a unique QR code that contains the signature from the signing authority along with other critical data, which is encrypted
- Finally smart diplomas are shared to the students in both printed and digital format

### Key Features

- emSigner supports certificates issued by any CA in addition to eMudhra's globally trusted certificates
- emSigner sends email alerts to prompt all stakeholders about recent updates
- emSigner gives the liberty for signers and reviewers to review and sign smart diplomas individually or in bulk
- With emSigner there will be zero loss of quality while printing diplomas
- emSigner offers robust and flexible diploma template design that can be customized to accommodate requirements of any size

**The paperless office solution uses following broad modules:**

#### emSigner:

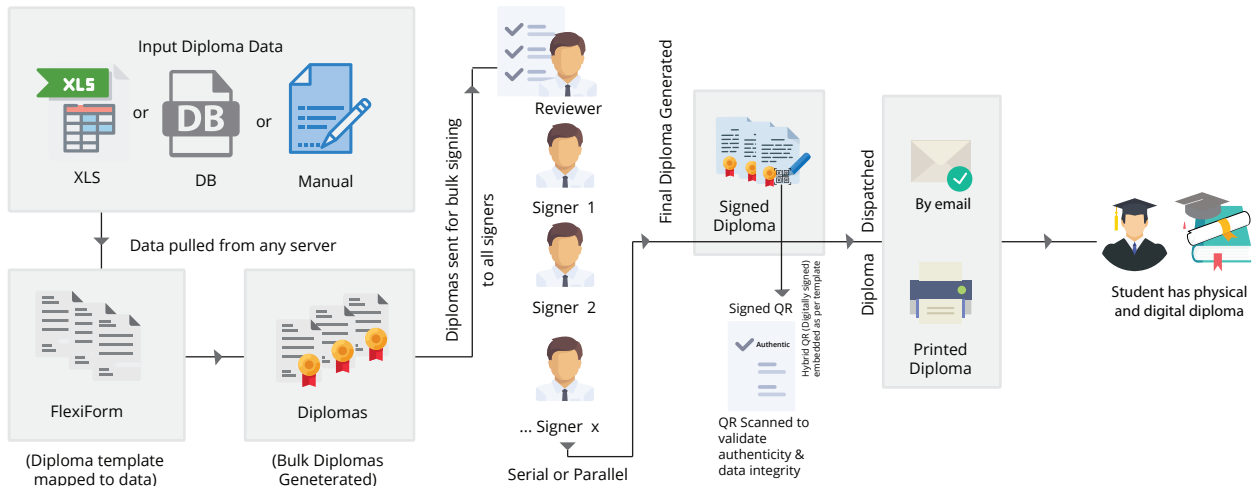
On-premise Digital Signature enabled workflow management solution used for defining paperless workflows

#### Hardware Security Module:

Protect the cryptographic infrastructure of some of the most security-conscious organizations in the world by securely managing, processing, and storing cryptographic keys inside a hardened, tamper-resistant device

#### emAS:

To automatically validate the signed documents that was received by the organization



\*Certificate can be AATL trusted e-Signature or certificate issued by any private or public CA Globally

## About eMudhra:

Much like the name, which is an embodiment of the seal of authenticity in the electronic or digital world, eMudhra is a cyber security solutions company and a trust service provider that is focused on accelerating the world's transition to a secure integrated digital society. With presence in 5 continents and a global delivery center in Bengaluru, India, eMudhra is empowering secure digital transformation of over 45 global banks, several Fortune 100 customers and thousands of SMEs.

