

Paperless Transformation of a healthcare institution using emSigner

eMudhra helps a healthcare institution go paperless and manage and streamline critical processes with ease

Industry

Healthcare Industry

Business Matters

One of the largest healthcare brands in India having international presence goes completely paperless by signing consent forms, pathological test reports, cash memos from chemist etc. using eMudhra's emSigner Digital Signature and Workflow capabilities and integrate it with the hospital's existing Hospital Information System (HIS)

Business Need

Hospital wanted to streamline its patient onboarding and discharge process so as to reduce time spent by patients in doing paper-based formalities. This was achieved by eliminating manual paper-based processes by a digital solution that allowed all the stakeholders to sign digitally.

Approach

Deploy an integrated solution to digitally sign and encrypt documents that are legally binding and guarantee authenticity, integrity and confidentiality of data.

The company should be able to use emSigner with the capability of having multi-party and real-time signing of documents such as discharge summary, cash memos from Hospitals/Chemists, pathological test report, certificate stating nature of operation performed etc. In a phased manner the organisation would integrate all its internal as well as external applications with emSigner to facilitate the signing of documents



Background

For a patient, the hospital had to maintain a multitude of documents such as consent form, certificate from attending medical practitioner, cash memos from the chemist, surgeon certificate stating nature of operation, pathological test report etc. manually signed in the physical form.

In addition to that, health insurance claim process was even more convoluted, time-consuming, error-prone and paper intensive. Generally, at the time of hospitalization, a preauthorization form was printed, signed and scanned multiple times. The same process was repeated with even more ancillary documents during the patient discharge process. *Thus patient admission and discharge was a lengthy and time-consuming process.*

eMudhra outlined the following key areas where emSigner could significantly improve and streamline document workflows with respect to Hospital Information System:

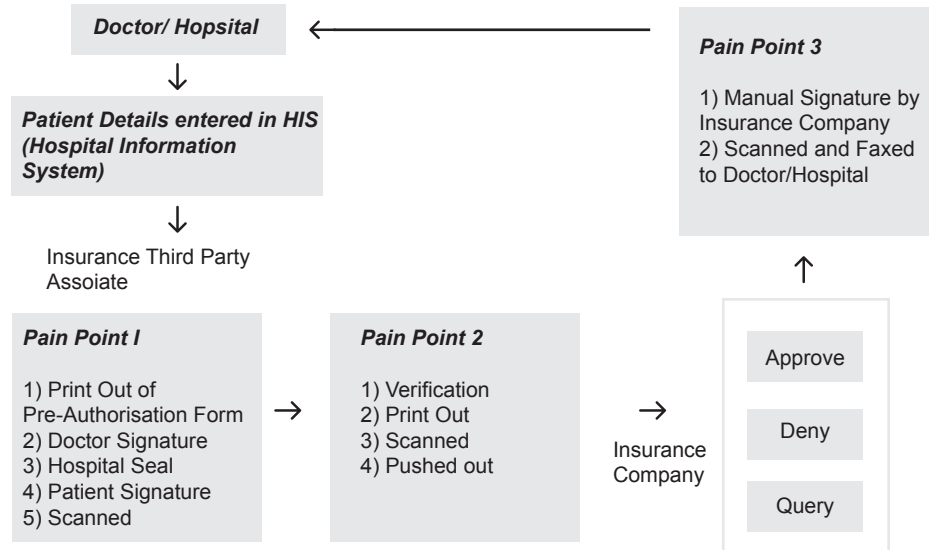
- Doctors would be able to sign preauthorization form digitally and same would be forwarded directly to Insurance's third party associates.
- The hospital would be able to encrypt and decrypt sensitive documents such as patient's medical records, sexual orientation, physical, psychological and mental health condition etc. as required under electronic Protected Health Information (ePHI) using eVault service
- emSigner would be integrated with Hospital Information System using web services API's
- The hospital would be able to send digitally signed documents and reports as necessitate by insurance companies in a smooth and efficient manner. This will lead to faster claim settlement.
- Digitally signed documents would be instantly archived and retrieved as and when required. This would prevent manual intervention and misplacement of documents

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 is generated by the issuer for the client in a secure

The following flowchart depicts pain points of cashless but paper intensive claim process.



Benefits

The Hospital reaped significant benefits by implementing digital signature based workflow signing. This includes

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- Faster Insurance claim processing
- Better visibility and accessibility of documents for patients
- Legal non-repudiation thereby reducing frauds
- Signing and approving documents anywhere, anytime
- Faster turnaround time, increased employees efficiency, productivity and transparency
- Meeting compliance & regulatory requirements
- Online and Offline signing capabilities
- Importing files from multiple clouds and file storage services like drop-box, Google drive into emSigner
- Tracking real-time status of signature progress happening on documents initiated for signing

Solution

eMudhra implemented emSigner – Secure Paperless Office solution to enable Digital Signature based approvals for the following workflows

- External flows for Vendor Onboarding and Vendor Payments
- Internal flows between finance and billing department
- Bulk signing of documents for sending monthly bills and payment reminders

emSigner was integrated with the ERP application over Webservices API for digital signing of documents

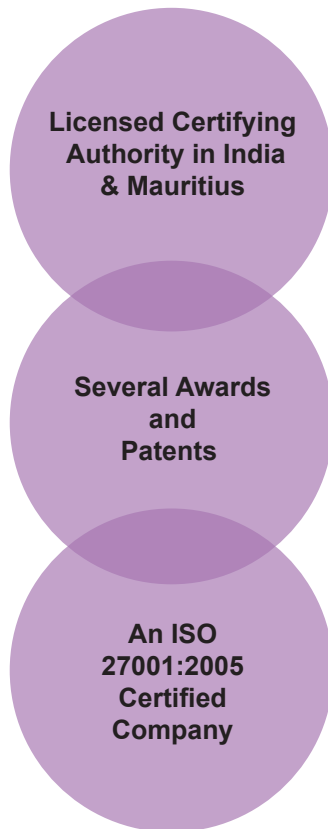
Deployment was done on premise which allowed company greater degree of control and customization and allowed the company to retain data on premise for confidentiality purposes

- For individual signing, individual digital signature certificates were issued to Authorized Signatories
- For Bulk Signing, Class 3 Document Signer Certificate was used which gives a higher risk assurance to relying parties for a critical use case such as Invoice Signing

From a security and risk standpoint, a Hardware Security Module was used to store the Class 3 Document Signer certificate

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
- **Class 3 Document Signer Certificate**
To sign critical documents such as invoices
- **emAS**
emMudhra authentication server which was used to automatically validate the signed documents that was received by the organization



About eMudhra

eMudhra is a technology and digital identity and transaction management company providing solutions which ease financial and statutory needs of consumers. eMudhra was established in 2008 and is a Certifying Authority in India and Mauritius to issue Digital Signature Certificates.

eMudhra's current enterprise and consumer solutions include Digital Signature Certificates, emSigner – Paperless Office Solution, emAS – secure multifactor authentication for banks, emCA for Digital Signature issuance and management and emStream – Voice of Customer Analytics using Semantics.

eMudhra is a market leader in India and has worked with large Banks, Financial Services companies and several Government agencies in India to implement Digital Signature based solutions which include secure access and paperless workflows.

eMudhra won the e-Asia award, an award given by AFACT (A United Nations body) for implementing Digital Signatures based on India's National ID – AAD-HAAR to bridge Digital Divide.