Electronic Signature

- Electronic signature is a signature capturing and document imaging solutions.
- Create/upload the electronic signature and apply to the shipping documents.
- Electronic signature can seamlessly integrated with Enterprise Resource Planning systems.
- Electronic Signature can be applied to Bill of Lading, Invoice, Delivery Order and other legal documents.
Electronic Signature

Today technology empowers those who want to expediently sign their multiple Bill of lading and legal documents, Agency managers can digitally sign their Bill of lading and legal documents integrated with unique Quick response code through electronic signature.

In current e-commerce era, online Bill of Lading has become more famous where manual signature of Bill of lading document can be easily replaced with digital signature through electronic signature.

To increase the productivity and reduce the manual work.
Benefits of Electronic Signature

**Benefits**

- **Its cheaper** – It saves the printing cost such as paper, ink, printer hardware.
- **Its quicker** – We can apply single signature to multiple shipment documents.
- **Its organized** – Instead of waiting for weeks for signing all the shipping documents, in minutes we can apply the signature to the multiple shipment documents.
Electronic Signature Process Flow

Agency Manager

Login

Electronic Signature

Draw

Upload

ERP System

Agency

ERP
Enterprise Resource Planning

RESTful Service

Easily apply e-Signature and unique QR Code is applied to multiple shipment documents
Digital Signature

- We can also apply digital signature to shipping documents to ensure the identity of the sender of the document, and possibly to ensure that the original content of the shipping documents that has been sent is unchanged.

- Digital signatures are easily transportable, cannot be imitated by someone else, and can be automatically time-stamped. The ability to ensure that the original signed Bill of lading arrived means that the sender cannot easily repudiate it later.

- PDF format of the Bill of lading document can be digitally signed with third party private key (Verisign) which can be verified by acrobat reader with the relevant public key, this process provides more confident to the customer that this document is original and not been forged.
SVM Digital Signature & Certification Process Flow

Digital Certification - Applying Process

Agency → Bill of Lading(*.pdf) → Hash Function → Certificate → Attach to Data → Digitally Signed Data

Digital Certification - Verifying Process

Customer → Bill of Lading(*.pdf) → Digitally Signed Data → Hash Function → Hash = Hash → Signature → Decrypt using signature's public key → Signature valid

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<table>
<thead>
<tr>
<th>Benefit</th>
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<tbody>
<tr>
<td><strong>Authentication</strong>, identification of the person that signs.</td>
</tr>
<tr>
<td><strong>Non repudiation</strong>, because the author cannot be denied of his work (he created and sent).</td>
</tr>
<tr>
<td><strong>Integrity of data</strong>, every change will be detected.</td>
</tr>
<tr>
<td><strong>Imposter prevention</strong>, Elimination of possibility of committing fraud by an imposter</td>
</tr>
<tr>
<td><strong>Tampered</strong>, document cannot be tampered</td>
</tr>
</tbody>
</table>

**Benefits of Digital Signature & Certification**
What is QR Code?

About QR Code

- QR – Quick Response Code
- Store up-to 7,089 Numerals
- Imprinted in Web Pages, Documents
- Supports mobile Platform
Use Case in Liner Industry

Use Case

Adding quick response (QR) code in shipment documents can increase the authenticity of the documents. Use case e.g.,

- Bill Of Lading (Original BL Doc)
- Container Release Order
- Delivery Order
- & more..
How it works?

- Online Bill of Lading Print event will generate secure encrypted code for each Bill of Lading.
- Encrypted code will be transformed into QR Code and printed in the document.
- Encrypted code will be mapped against the BL in the system (not revealed to the user).
- Originality of the document will be confirmed by scanning the QR code at the Import office.
- This use case can avoid forged documents i.e., manipulation of the content outside the LRP system.
- It will be very effective since stationeries are out with few customers.
Work Flow – Bill of Lading

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As like Bill of Lading document, QR code carrying encrypted code will be print in the Container Release Order and Delivery Order documents.

Container Release Order and Delivery Order presently printed on plain A4 sheets, which is very easy to forge and release empty or full container from terminal.

QR code printed Container Release Order and Delivery Order ensures that document has been generated from ERP system which can be verified by Terminal/Warehouse staff through Android or iOS app (SmarTrac).
D-Sign is the software which can provide all the above mentioned features in its software. For documents D-Sign can provide:

- Digital Signature
- Digital Certification
- QR code security
## Features of D-Sign

- **Sign** legal documents **onscreen** or upload scanned signature.
- **Secure** auto-sign when the agency verifies and accepts the documents.
- **Validate** documents with digital signature using strong hash algorithm.
- Verified by **Multiple Factor Authentication**, such as a PIN, password and sequence-based token codes.
- **Strong** encryption and decryption mathematical code algorithms.
- **Live Tracking** of documents through QR Code function.
- **Accurate** filter of documents using unique QR code.
## Benefits of D-Sign

<table>
<thead>
<tr>
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<th>Description</th>
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<tr>
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</tr>
<tr>
<td><img src="image" alt="Qualified digital signature." /></td>
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<td><img src="image" alt="Quicker - apply single signature to multiple shipment documents." /></td>
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## Comparison Features of SVM D-Sign

<table>
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<tr>
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<th>Electronic Signature</th>
<th>Digital Signature</th>
<th>QR Code</th>
<th>SVM D-Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to use</td>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>✓</td>
</tr>
<tr>
<td>Low cost</td>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>✓</td>
</tr>
<tr>
<td>No hardware/software required</td>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>✓</td>
</tr>
<tr>
<td>Document integrity</td>
<td>X</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Accepted Internationally</td>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>✓</td>
</tr>
<tr>
<td>Mobile Friendly</td>
<td>X</td>
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