

eMortgage Technical Requirements Version 3.1

December 2023



Table of Contents

Preface.....	3
Creating SMART Doc® eNotes.....	4
Registering eNotes.....	7
Packaging eNotes and Documents for Delivery to Fannie Mae	7
Package Sample.....	8
Delivering eNotes to Fannie Mae.....	9



Document Revision History

Date	Description
May 7, 2020	Version 3 Creating SMART Doc [®] eNotes - added requirements for Power of Attorney executed notes Packaging eNotes and Documents for Delivery to Fannie Mae - added information on supplemental document delivery
December 19, 2023	Version 3.1 Added requirement for hashing algorithm to be SHA-256 or greater. Removed reference to <i>Guide to Delivering eMortgages to Fannie Mae</i> due to collapsing of eMortgage requirements into <i>Selling Guide</i> .

Preface

This document is intended as a companion to the *Selling Guide* and these requirements are incorporated into the terms of the lender's Mortgage Selling and Servicing Contract, as amended by the eMortgage Addendum. The purpose of this document is to provide detailed technical specifications and samples to assist developers and managers in creating and delivering eMortgage loans for delivery to Fannie Mae.

This document covers the following topics:

- Creating SMART Doc[®] eNotes
- Registering eNotes
- Packaging eNotes and related documents for Delivery to Fannie Mae
- Delivering eNotes to Fannie Mae



Creating SMART Doc® eNotes

eNotes and Addenda delivered to Fannie Mae in SMART Doc format must be in Category One SMART Doc format as specified by MISMO's *SMART Document Implementation Guide V. 1.0* or later version, including Errata Notes, available for download at www.mismo.org. SMART Doc eNotes must be created to the SMART Doc V. 1.0.2 specification using the Closing DTD 2.3.1 and meet all MERS® eRegistry requirements, including having a unique MIN (Mortgage Identification Number).

In addition, the following requirements apply to SMART Doc eNotes delivered to Fannie Mae:

- The SMART Doc eNote must contain the following elements:
 - //SMART_DOCUMENT/SIGNATURES
 - //SMART_DOCUMENT/DATA/MAIN
 - //SMART_DOCUMENT/VIEW
- The SMART Doc eNote must not contain more than one View; that is, the file must not contain more than one //SMART_DOCUMENT/VIEW element.
- A SMART Doc View must contain only one of the following:
 - An externally referenced HREF; or
 - Element content only
- The SMART Doc _Name must include the .xml extension.
- The VIEW _MIMETypeDescription must be text/html.
- For every required data point within the DATA element of the SMART Doc eNote, an ARC must be present that validates the corresponding data point in the VIEW element.
- Fannie Mae does NOT allow a Social Security Number inside the SMART Doc eNote. (Information on how to provide the Social Security Number to the MERS eRegistry for eNote registration can be obtained from the MERS eRegistry technical support team.)
- If the signature used is a digitized signature, such as a holographic signature created with a signing pad, the signature must be attached as an external file, which may be either .png, .jpg or .gif, and referenced by the tamper-evident seal.
 - Please follow the MERS® eRegistry requirements when eRegistering with MERS.
- The hashing algorithm used to apply the tamper-evident seal must be SHA-256 or greater.
- The SMART Doc attribute _StateType must be: “Signed,” “Recordable,” or “Recorded.”
- All eNotes must conform to one of the following character encodings:
 - UTF-8



- UTF-16LE
 - UTF-16BE
 - UTF-8 with BOM
 - UTF-16LE with BOM
 - UTF-16BE with BOM
- Document Type Declaration

Per MISMO standard definitions, the SMART Doc eNote uses the 1.02 Document Type Definition, which needs to be indicated before the header section within the Document Type Declaration (see next page). In addition, a “RegistryOperator” attribute needs to be included in the declaration as an extension to the 1.02 DTD, and this attribute must be present in both the “View” and “Data” sections of the SMART Doc eNote, identifying the registry operator as “MERSCORP Holdings, Inc., a Delaware corporation.”

```
<!DOCTYPE SMART_DOCUMENT SYSTEM "SMART_DOCUMENT_V_1_02.dtd" [<!ENTITY % CUSTOM.ANY "RegistryOperator">
```

```
<!ELEMENT RegistryOperator EMPTY>
```

```
<!ATTLIST RegistryOperator Name CDATA #REQUIRED>]>
```

Power of Attorney (POA) executed eNotes

If the eNote is executed using a power of attorney, the following requirements must be met:

- The data section must provide the `_POWER_OF_ATTORNEY` element.
- The POA document must be packaged and delivered to Fannie Mae via MERS eDelivery in a separate eMortgage Package along with the eNote or after delivery of the corresponding eNote (see **Packaging eNotes and Documents for Delivery to Fannie Mae** below)

Sample XML:

- **The data section must provide the `_POWER_OF_ATTORNEY` element**

```
<BORROWER BorrowerID="Brwr01" NonPersonEntityIndicator="N" _FirstName="XXXX"
_LastName="xxxx" _MiddleName="" _NameSuffix=""/>
```

```
<BORROWER BorrowerID="Brwr02" NonPersonEntityIndicator="N" _FirstName="xxxx"
_LastName="xxxx" _MiddleName="" _NameSuffix="">
```

```
<_POWER_OF_ATTORNEY _SigningCapacityTextDescription="as attorney in fact"
_UnparsedName="XXXXX"/>
```

```
</BORROWER>
```



- **There must be an ARC element linking the _UnparsedName in POWER_OF_ATTORNEY to the view field.**

```
<OPERATOR _Type="OR">
```

```
<ARC
```

```
DataLinkDescription="//LOAN/_APPLICATION/BORROWER[2]/_POWER_OF_ATTORNEY/@_Signi  
ngCapacityTextDescription" ViewLinkDescription="id(BORROWER2_POWER_OF_ATTORNEY-  
_SigningCapacityTextDescription)"/>
```

```
<ARC
```

```
DataLinkDescription="//LOAN/_APPLICATION/BORROWER[2]/_POWER_OF_ATTORNEY/@_Signi  
ngCapacityTextDescription" ViewLinkDescription="id(BORROWER2_POWER_OF_ATTORNEY-  
_SigningCapacityTextDescription)">
```

```
<CONVERSION _MaskDescription="NullEqUnderscore" _Type="FillMask"/>
```

```
</ARC>
```

```
</OPERATOR>
```

```
<OPERATOR _Type="OR">
```

```
<ARC
```

```
DataLinkDescription="//LOAN/_APPLICATION/BORROWER[2]/_POWER_OF_ATTORNEY/@_Unp  
arsedName" ViewLinkDescription="id(BORROWER2_POWER_OF_ATTORNEY-  
_UnparsedName)"/> <ARC
```

```
DataLinkDescription="//LOAN/_APPLICATION/BORROWER[2]/_POWER_OF_ATTORNEY/@_Unp  
arsedName" ViewLinkDescription="id(BORROWER2_POWER_OF_ATTORNEY-  
_UnparsedName)">
```

```
<CONVERSION _MaskDescription="NullEqUnderscore" _Type="FillMask"/>
```

```
</ARC>
```

```
</OPERATOR>
```

```
<SIGNATURE_BELOW_LINE>
```



```
<span class="dataEntered" id="BORROWER2-_FirstName">xxxx</span>
<span class="dataEntered" id="BORROWER2-_LastName">xxxx</span>
<span class="dataEntered" id="BORROWER2_POWER_OF_ATTORNEY-
_UnparsedName">xxxxx</span>
<span class="dataEntered" id="BORROWER2_POWER_OF_ATTORNEY-
_SigningCapacityTextDescription">Attorney-in-Fact for</span>
<span> (Seal)</span>
<span> - Borrower</span>
</SIGNATURE_BELOW_LINE>
```

Registering eNotes

All eNotes delivered to Fannie Mae must first be registered in the MERS® eRegistry within one (1) business day of signing. The record in the MERS eRegistry must reflect the originating lender – the lender whose name is on the eNote – as the first Controller. Fannie Mae requires that SMART Doc® eNotes be registered by using eMortgage Package Registration, which requires an eMortgage Package to be presented at time of registration in the format specified by MISMO. The package must include a version 1.02 SMART Doc eNote that is Gzip Compressed and Base64 encoded in the EMBEDDED_FILE element of the eMortgage Package.

Detailed documentation on MERS' registration requirements is available at www.mersinc.org.

Packaging eNotes and Documents for Delivery to Fannie Mae

All electronic mortgage documents must be enclosed in an eMortgage Package for delivery to Fannie Mae, as described by MISMO and MERS® eRegistry specifications. The following requirements apply to all eMortgage Packages submitted to Fannie Mae:

- eNotes and other electronic documents delivered to Fannie Mae must be contained in a MISMO eMortgage Package utilizing version 2.4 of the eMortgage Package.
- An eMortgage Package must contain the required EMBEDDED_FILE. It does need to have at least one EMBEDDED_FILE element that is a SMARTDoc. We only handle one SMARTDoc within an eMortgage Package. If any additional EMBEDDED_FILE elements exist, they must be image files.
 - When delivering the eMortgage Package to FannieMae, the SMARTDoc must be GzipBase64 encoded within the eMortgage Package.
 - When delivering the eMortgage Package to FannieMae, the images must be uncompressed and Base64 encoded within the eMortgage Package.



- References from the SMART Doc® eNote's XHTML View and Digital Signature to EMBEDDED_FILE elements must be relative URLs. No protocol or absolute URLs will be accepted. Our tamper seal expects these relative URLs to point to EMBEDDED_FILE elements in the eMortgage Package which are signed when tamper sealing.
- An eMortgage package must contain no more than one eNote or document
- An eMortgage Package must NOT contain a SMART_DOCUMENT or nested EMORTGAGE_PACKAGE element.
- Each file in the package must be identified with a unique _ID.
- Each SMART Doc eNote in the eMortgage Package must be tampersealed.
- All eMortgage Packages must conform to one of the following character encodings:
 - UTF-8
 - UTF-16LE
 - UTF-16BE
 - UTF-8 with BOM
 - UTF-16LE with BOM
 - UTF-16BE with BOM

Package Sample

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<!DOCTYPE EMORTGAGE_PACKAGE SYSTEM "eMortgage_Package_V_1_02.dtd">
```

```
<EMORTGAGE_PACKAGE MISMOVersionIdentifier="1.02" _ID="PKG_ID_X973">
```

```
<EMBEDDED_FILE _EncodingType="GzipBase64" _ID="FILE_ID_0"
```

```
_Name="Dev001_3200_FxdRate_Multistate_ValidENote_Signable.xml"><DOCUMENT>PD94bWwgdmVyc2lvbj0iMS4wLWliBmNvZGluZz0iWVRGLTgiPz4KPCFET0NUWVBFIFNNQVJUX0RPVNRU5UIFNZU1RFTSAiU01BUiRfRE9DVU1FTIRfVl8xXzAyLmR0ZCIgWzwhRU5USVRZICUgQ1VTNLkFOWSAnfCBSZWdpc3RyeU9wZXJhdG9yJz4KPCFFTEVNRU5UIFJlZ2lzdHJ5T3BlcmF0b3lgQVFK+CjwhQVRUTEITVCBSZWdpc3RyeU9wZXJhdG9yIE
```

[WE HAVE TRUNCATED THE BASE64 ENCODED DOCUMENT]

```
</DOCUMENT></EMBEDDED_FILE>
```

```
</EMORTGAGE_PACKAGE>
```

Supplemental Document Delivery

When transmitting documents between eVaults using MERS eDelivery, if the document is not a SMART Doc (with the associated document identifier contained internally), then the document identifiers which are part of the eMortgage Package structure must be present



to identify the document contained in the package. The following are the requirements for packaging non-SMART Docs for MERS eDelivery to Fannie Mae:

- Each document must be contained within a separate MISMO v2.4 eMortgage Package.
- An eNote must be either (a) included in a separate eMortgage Package in the same eDelivery, OR (b) delivered prior to the supporting document
- The embedded document must be contained within the <EMORTGAGE_DOCUMENT> element
- Package must identify the MERS MIN.
- The DOCUMENT_INFORMATION must be present and include:
 - EMBEDDED_FILE_ID (max 50 characters).
 - _Type using the enumerated list within the v2.4 specification.
 - If _Type “Other” is selected, the associated description must be supplied via _TypeOtherDescription. It is recommended that the enumerations from DocumentType the latest version of the MISMO standard be used for this purpose.
- Embedded file “_EncodingType” must be “Base64” or “GzipBase64”.
- “MIMETYPE” must be one of the following: “application/pdf”, “image/jpeg”, “image/tiff”, or “image/png”.

Delivering eNotes to Fannie Mae

Fannie Mae requires Sellers to utilize MERS® eDelivery to deliver eNotes and related electronic documents. MERS eDelivery provides a secure method for distributing eMortgage packages from one MERS® eRegistry member to another using the MERS eRegistry infrastructure and transaction security requirements. However, if the Seller (or Seller’s business partners) are utilizing the eOriginal eVault platform for document management, a direct eDelivery option within eOriginal is permissible for document transmission.

Prior to delivering eMortgages to Fannie Mae, the lender’s MERS Org ID (unique organization identifier issued by MERS) must be set up by Fannie Mae in our delivery system. This will be done once the lender has completed required testing with MERS and Fannie Mae, and is approved by Fannie Mae to deliver eMortgages.

Once the eNote has been successfully delivered to Fannie Mae (with a Distribution Approval status of *Approve*), lenders should transmit a request to the MERS eRegistry to begin the process of transferring control of the eNote to Fannie Mae. Lenders should transmit a “Transfer of Control and Location” request to MERS to initiate the transfer of ownership and to update MERS to show Fannie Mae as the Controller and Location of the Authoritative Copy of the eNote.

Fannie Mae requires that MERS’ records for loans transferred to Fannie Mae contain the Servicer’s Org ID as Service Agent (an entity authorized by the Investor to perform certain transactions within the MERS eRegistry). However, we



do permit the Master Servicer to delegate that function to a sub-servicer or another 3rd party (e.g. Custodian). The Org ID of the party making the updates should always be in the “Servicing Agent” field on the MERS eRegistry.

Upon Fannie Mae’s receipt of the “Pending Transfer Request” message from the MERS eRegistry, Fannie Mae’s eMortgage Delivery system will seek to match the transfer request against eNotes delivered to the application. If the application finds a match, it will perform some validations including comparing the hash value of the eNote registered on MERS with the one presented for delivery. Once the eNote is verified, Fannie Mae will accept the transfer request submitted by MERS. If Fannie Mae receives a transfer request for a MIN for which the eNote has not yet been delivered, the request will be held in queue awaiting delivery of the note for the remainder of the calendar day. If the eNote is not received by Fannie Mae by the end of the Effective Date specified in the transfer, the MERS eRegistry will automatically cancel the transfer and return a Failed Completion Notification to the lender and Fannie Mae. In such a case, the lender will need to complete a successful eDelivery prior to initiating a new transfer request.