



MISMO[®] Software Compliance Certification Program Overview

VERSION 4.0



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1.0 Purpose and Value Proposition

1.1 Purpose of the MISMO® Software Compliance Certification Program

The Mortgage Industry Standard Maintenance Organization (MISMO) is introducing a new software compliance certification program in order to assess software vendors' proper use of MISMO standards. This Compliance Certification program will provide a level of assurance to potential users and vendors of software and technology tools that the company offering MISMO certified tools and technology develops and maintains the MISMO oriented modules under sound policies and procedures that demonstrate commitment to the MISMO Standards. This document outlines the background, benefits, and process for achieving MISMO Software Compliance Certification for a product or tool at the Standard and Premiere levels.

The objective of the Compliance Certification program is to provide sufficient objectivity, rigor and structure so that mortgage technology vendors and potential users feel confident in the value of the certification. For potential users, the value may occur during the Request for Information (RFI) / Request for Proposal (RFP) process when they identify MISMO Certification as one criterion to be used in the selection of software vendors and integration partners. Additionally, it will assure potential users that the vendor has the ability to keep up with changes to the MISMO Standards. Certification also confirms to vendors that they are providing a product that will be able to appropriately store and generate MISMO based information in a data structure, file transmission, or report. They should also feel confident that their product(s) will be easier to integrate and easier to market, since the Compliance Certification provides additional information about the product's use of MISMO.

The program features a two-level design that allows for broad participation with Standard Level Certification (self-assessment with reference checks) and provides for progressively more rigorous testing by an independent Authorized Assessor in the Premiere Level Certification.

1.2 Interoperability Benefits

By introducing this program, MISMO intends to move the industry toward a broader industry adoption of the MISMO Standards and a level of transparency as to which vendors offer compliant products. MISMO's logical data dictionary (LDD) provides a common set of definitions and the MISMO XML schema provides a common format with which all industry participants can communicate. Software vendors who have begun investing in MISMO adoption report faster, less costly integration with fellow MISMO adopters compared with those vendors who maintain proprietary data definitions and formats. For their part, market participants are increasingly looking for "plug and play" software products that will interoperate with each other rather than requiring costly custom interfaces. Many mortgage participants say they want to avoid being locked into proprietary implementations and believe that MISMO compliance streamlines integration, reduces "time to market", and reduces implementation risks and costs.



1.3 Regulatory Compliance Benefits

By standardizing data definitions and improving data integrity, broad adoption of mortgage data standardization has the potential to reduce the compliance risks associated with Dodd-Frank implementation as well as the compliance risks associated with doing business with the Government Sponsored Enterprises (GSEs), Federal Housing Authority (FHA), Veterans Administration (VA), and Ginnie Mae. In fact, recent mandates from Federal Housing Finance Agency (FHFA) have made MISMO adoption a requirement for delivering loans to the GSEs. Finally, by providing investors with the volume and quality of loan level data points they require to properly assess default and prepayment risks, implementation of MISMO standards could contribute to restarting the private securitization market.

1.4 Market Differentiation Benefits for Software Vendors

Some large lenders report that they already require MISMO expertise and experience in their RFPs/RFIs. Looking forward, the MISMO Compliance Certification program could be used by lenders as a factor in making vendor, integration partner (investor, sub-servicer, etc.), and/or build vs. buy decisions. Those vendors who successfully obtain Compliance Certification for one or more products will be able to market such products as MISMO certified in specific domains (as described below) and will also be afforded the right to use the MISMO Compliance Certification Mark, both of which should provide clear differentiation in marketing and sales initiatives. However, before these benefits can be realized, the MISMO Compliance Certification program intends to establish a reliable set of standards for what it means to be MISMO compliant. Like other industry standards organizations before it, MISMO has established a multi-dimensional Compliance Certification program that assesses the effectiveness of an organization in terms of its standards adoption policies, procedures, and practices and looks for proof of compliance in terms of test case results.

1.5 MISMO® Background

The Mortgage Industry Standard Maintenance Organization (MISMO) is a non-profit organization dedicated to defining information standards for the residential and commercial real estate finance industries. MISMO Standards are grounded in an open process to develop, promote and maintain voluntary standards. The model allows mortgage lenders, investors (i.e. GSEs) in real estate and mortgages, sellers/servicers, pool issuers, industry vendors, borrowers, mortgage insurers, and other parties to exchange real estate finance-related information more securely, efficiently and economically. MISMO follows a collaborative and consensus approach to the development and maintenance of a comprehensive set of standards and data points for all stages of the mortgage loan life cycle.

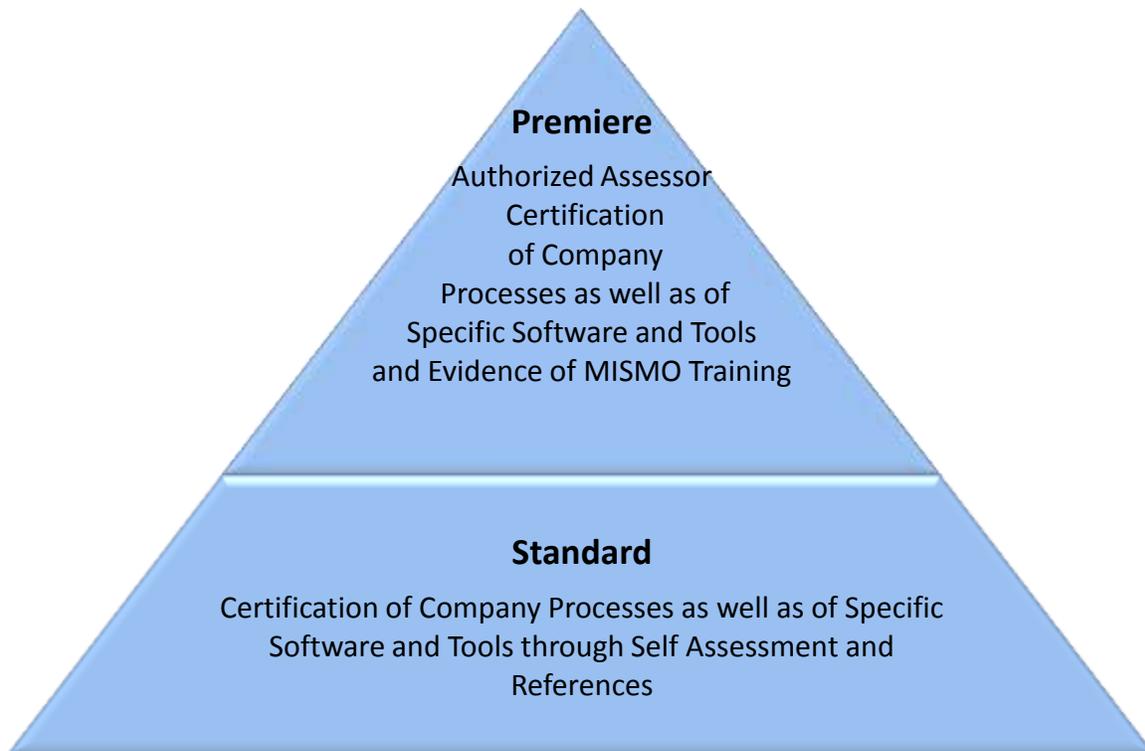
The MISMO Reference Model consists of two deliverables that enable the mortgage industry to communicate using standard formats and data definitions:

- A Logical Data Dictionary (LDD) to provide standardized business names, definitions, enumerations and relationships (XPATHs).
- An XML schema representation that encompasses standard data structures from across the mortgage loan life cycle.



2.0 MISMO® Software Compliance Certification Levels

The MISMO Software Compliance Certification Program consists of a two level, progressively more sophisticated designation.



- Standard Level certification requires a comprehensive self-assessment around policies, procedures, test results, and other artifacts. MISMO staff will validate information provided and either issue a certificate or provide feedback on areas that require remediation. If remediation is required, the application may be updated and resubmitted for review. The MISMO staff review will be limited in scope. To gain the certificate, the entity applying for the certificate must also provide a reference or alternative validation from at least two independent sources. An example of an independent source would include evidence of the Applicant name listed on the publicly posted GSE Uniform Mortgage Data Program (UMDP) vendor verified listing.
- Premiere Level certification includes the same components as Standard Level with two exceptions. The review of policies, procedures, test results, and other artifacts will be conducted by an independent MISMO Authorized Assessor. The review will be much more rigorous than in Standard Level. Given the nature of the detailed Authorized Assessor review, references are not required for the Premiere Level. Finally, Premiere Level certification requires evidence of a MISMO related training curriculum or completion of the highest level of MISMO sponsored training available by members of the project development team.

Standard Level Compliance Certification Overview

<p>Standard Level Requirements</p>	<ul style="list-style-type: none"> • <u>Compliance Certification Application Form</u>: Certification application for software or tools aligned with business domains that use portions of, or the entire MISMO schema and/or logical data dictionary (LDD). • <u>Standard Level Self Assessment</u>: Submission of a signed self-assessment that includes: <ul style="list-style-type: none"> ○ Explanation of Applicant policies and procedures that shows evidence that the Applicant manages software development with MISMO included in formal SDLC processes. ○ Explanation of Applicant policies and procedures related to the use of MISMO in the software development life cycle. ○ Evidence of use of v3.x or explanation requesting waiver. ○ Proof of the capabilities to store and/or produce MISMO oriented data, files, and reports. • <u>Compliance Certification Reference Form</u>: Two verifiable references or alternative validations that can attest to Applicant’s ability to produce MISMO oriented data. • MISMO review and approval • Annual renewal
<p>Benefits to Applicant</p>	<ul style="list-style-type: none"> • Provides immediate visibility and market recognition for Standard Level Compliant Applicants whose products receive certification • Allows Applicant to refer to specific software/tools as certified for specific Domains • License to use MISMO Standard Level Compliance Certification Mark for specific Domains • Allows for gradual progress toward Premiere Level certification • Enhances ability to stay in step with MISMO changes through compliance with annual assessment requirements.
<p>Limitations</p>	<ul style="list-style-type: none"> • Potential users of software may not place significant weight on a self assessment. • Does not provide rigor of an Authorized Assessor assessment.
<p>Role of MISMO</p>	<ul style="list-style-type: none"> • Review of Certification Application. • Review of Self Assessment • Validation of integration partner references provided • Limited review of submitted artifacts and test cases • Limited feedback on rigor of artifacts and test cases • Provision of MISMO Compliance Certification Mark license if certification is successful • Management of Appeals process if objection to denial of certification



Premiere Level Certification Overview

Premiere Level Requirements	<ul style="list-style-type: none"> • <u>Compliance Certification Application Form</u>: Certification application for a combination of software and tools aligned with business domains that use portions of, or the entire, MISMO XML schema and LDD. • Review by an Authorized Assessor contracted by Applicant <ul style="list-style-type: none"> ○ Interviews with key stakeholders ○ Review of Applicant policies and procedures that shows evidence that the Applicant manages software development with MISMO included in formal SDLC processes ○ Review of Applicant policies and procedures related to the use of MISMO in the software development life cycle. ○ Creation of use cases or example transactions that map to the Certification application specified domain. ○ Testing of the use cases to prove capabilities to store and/or produce MISMO oriented data, files, and reports. The reviewer will create the test cases and expected results and the Applicant shall execute the tests. • Evidence of an in-house MISMO related training curriculum or completion of the highest level of MISMO sponsored training available by key project/development team members. Training should be for key personnel as defined by the Applicant organization and operating model. • No references or alternative certifications are required • Authorized Assessor will provide written report identifying areas meeting certification requirements and areas requiring remediation, if any. Once all areas are certified, the Authorized Assessor will recommend to MISMO that the Applicant receive Certification for specific domains. • Annual renewal
Benefits to Applicant	<ul style="list-style-type: none"> • Provides independent assessment of compliance and testing of internal policies and procedures related to MISMO • Provides immediate visibility and market recognition for Premiere Level Compliant Applicants whose products receive certification • Allows Applicant to refer to specific software/tools as certified for specific Domains • License to use MISMO Premiere Level Compliance Certification Mark for specific Domains which currently represents the highest level of Certification. • Enhances ability to stay in step with MISMO changes through compliance with annual assessment requirements.
Role of Authorized Assessor	<ul style="list-style-type: none"> • Contract directly with Compliance Certification Applicant • Complete on-site visit and detailed review of Applicant identified artifacts to assess level of compliance with MISMO standards • Develop recommendation for whether or not Applicant software or tool should be certified MISMO Compliant within the specified domain(s).
Role of MISMO	<ul style="list-style-type: none"> • Review of Certification Application • Direct Applicant to roster of Authorized Assessors • Review of Authorized Assessor assessment and recommendation



	<ul style="list-style-type: none"> • Provision of MISMO Compliance Certification Marks license if certification is successful • Management of Appeals process if objection to denial of certification
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3.0 Components of Certification

Application is for Compliance Certification that a product, or combination of software and tools, aligned with specific business domain(s), uses portions or the entire MISMO Reference Model (XML schema and Logical Data Dictionary) in a manner compliant with the MISMO standard.

In general, both Standard and Premiere Levels require certification of the following:

1. Company policies and practices as related to MISMO.
2. Appropriate use of the MISMO schema and LDD for specific business domains.
3. Software or tool and proof of capability to store and/or create MISMO oriented data transmissions, interfaces, or reports.

The table below illustrates the two side by side.

Component	Standard Level	Premiere Level
Certification of Applicant policies and practices relating to use of MISMO in product development	✓	✓
Certification of appropriate use of MISMO in specific business domains	✓	✓
Certification of software and tool capabilities and compliance using test cases	✓	✓
Self Assessment required with MISMO staff approval	✓	
References or alternative validations from two separate entities	✓	
Authorized Assessor review and sign off with recommendation for certification		✓
Requirement for MISMO education and training		✓
Annual Renewal	✓	✓



3.1 Certification of Company Policies and Practices

At a minimum it is expected that an Applicant has:

1. One or more designated employees who are responsible for interaction with MISMO, staying abreast of version changes, and understanding the XML schema and Logical Data Dictionary. The number of employees is based on what is reasonable for the size and complexity of the Applicant, the number of software products or tools, and the number of domains associated with the certifications.
2. A policy and/or procedure that identifies how the Applicant intends to use the MISMO Reference Model (XML Schema and LDD).
3. Internal training on the MISMO Reference Model or evidence that individuals either participate regularly as MISMO volunteers or have completed MISMO educational tracks deemed appropriate for their role.

3.2 Certification of Appropriate Use of the MISMO[®] Reference Model (XML Schema and Logical Data Dictionary)

Appropriate Use of MISMO

This portion of the assessment examines whether the MISMO XML schema and LDD are being used appropriately and as intended by MISMO. It is expected that the Applicant has:

1. Design artifacts that contain references to MISMO and that indicate that the MISMO XML schema is being used within their architecture.
2. Policies or strategies that address how to keep current with changes to the MISMO XML schema and LDD.
3. A data dictionary, data mapping document or metadata repository that includes MISMO data definitions and naming conventions from the appropriate version.
4. Evidence that the product or software being reviewed is using v3.x. If the Applicant is not using v3.x, the Applicant must provide an explanation that justifies the use of a lower version.

Business Domains

The section above described which artifacts will be reviewed. In addition, the information provided should be referenced to appropriate sections of the MISMO Reference Model (XML Schema and LDD) dictionary that are referred to as business domains. These domains below consist of data points and containers in the Reference Model. Currently these domains are defined as follows:



Mortgage Business Process	Business Domain	Example test cases (examples only, other test cases may be suggested)
Appraisal	Appraisal	- Appraisal Report Import or Export -MISMO 2.6 “UAD” Appraisal Export with 3.x changes
Origination	Application Loan Estimate Closing	-V3.x 1003 import/export -Mortgage Application v2.3 with V3.x changes -Product and Pricing import/export -CFPB Closing Disclosure Form
Underwriting	Underwriting	-AUS interface with LOS vendor -AUS v2.4 with 3.x changes
Real Estate Services	Credit Reporting Flood Insurance Mortgage Insurance Property Reporting Title	For any RE Service, MISMO 3.x formatted import/export: -Credit Reporting v2.4.1.1 with 3.x changes -Flood v2.4 with 3.0 changes -MI Application v2.4, MI Policy Cancel v2.4 with 3.x changes -Produce 3.x Property Report -Property Reporting v2.3.2 with 3.x changes -Title Service 3.x import/export -Title v2.3.2 with 3.x changes
Secondary	Loan Delivery Product / Pricing Pipeline Management and Hedging	-MISMO Delivery “ULDD”; one other -Product and Pricing v2.3.2 with 3.x changes -Data for pricing and commitment -Pipeline Report
Servicing and Investor Reporting	Monthly P&I Default Loss Mitigation Foreclosure Servicing Transfers Asset Management (REO)	-Agency Reporting; data corrections; payment data -Default Reporting -Loan modification data import/export -Foreclosure Payment Processing; non-performing loan reporting -Loan Bundling and Transfer; transfer to sub-servicer -REO sale data transfer
Securitization	Pooling Disclosure	-Pool Delivery Process (MBS to Investor) -Loan Level Disclosure for MBS
Document	Document	-Document headers; specific documents
SMARTDoc®	SMARTDoc®	-Electronic packaging
Information Exchange (Workflow)	Information Exchange	-Products or components whose primary purpose is to facilitate electronic data exchange among multiple partners across a significant portion of the MISMO model or certification program domains. Does not imply support of a specific business process or domain.

MISMO recognizes that an Applicant may have created its own aggregations of portions of the schema. This is an acceptable practice and should be described in your self assessment or to the Authorized Assessor.

Compliance Certification Marks, when licensed to Applicants who achieve certification for software/tools, will be specific to the designated domains for which compliance has been exhibited.

3.3 Certification of Software and Tools

The assessment of the software and tools includes an evaluation of the software or tool's ability to receive, transmit, or store data according to the MISMO standards. Below is a list of options for providing evidence of compliance with this requirement. Applicants must show all that may apply. Note that any one software component may map to one or more of the items below.

1. Proof of storage of data in a MISMO format by providing a data extract for a sample set of data determined in the application process.
2. Proof of the ability to create a data file for transmission. This includes a sample test case, expected results, and the actual data file.
3. Proof of the ability to create a report using MISMO data. This includes a sample test case, expected results, and the report.

3.4 Self Assessment and Submission of References (Standard Level Only)

1. The Standard Level Applicant must fill out a self assessment form (Standard Self Assessment Tool in the Application Package) answering a series of questions related to:
 - a. Company policies and practices
 - b. Appropriate use of MISMO
2. The Standard Level Applicant must prove that their software or tool is able to store and produce MISMO oriented data, files, and reports (as applicable in the tool) by:
 - a. Creating appropriate test cases
 - b. Creating expected results
 - c. Showing test results in the form of data sets, files, or reports
3. The Standard Level Applicant must provide a list of all artifacts referenced in bullet points 1 and 2 above.
4. The Standard Level Applicant must provide MISMO staff with all artifacts in electronic form for review.
5. The Standard Level Applicant must include two references, alternative verifications, or a combination. A valid reference should be from a customer using the software or tool who can attest to the capability related to the storage of MISMO data, the creation of files and generation of reports. An alternative verification is from an entity that validates the capability related to the storage of MISMO data, the creation of files and generation of reports. Examples could include evidence that the Applicants name is included on the GSE Uniform Loan Delivery Dataset (ULDD) Vendor Verified as published on the web.



3.5 Authorized Assessor Assessment (Premiere Level Only)

1. The Premiere Level Applicant must select, from the Authorized Assessor list published by MISMO, an Authorized Assessor to review their company development policies and procedures, as well as their software or tools.
2. The Premiere Level Applicant must provide the Authorized Assessor access to key personnel, policies and procedures, and specific software and tools.
3. The Authorized Assessor will interview Applicant personnel, review policies and procedures and perform an independent testing to confirm the software and tool capabilities to store MISMO data, create files, and reports.
4. The Authorized Assessor will review evidence of MISMO education described in 3.6 below.
5. The Authorized Assessor will produce a report illustrating findings including any areas for remediation.
6. Once all items are remediated, the Authorized Assessor will provide a signed report to both the Applicant and MISMO with their recommendation specific to the granting of the Compliance Certification to Applicant.
7. The Applicant contracts directly with the Authorized Assessor for its services and pays the Authorized Assessor directly for completion of the Authorized Assessor review. Fees for this service are separate from the application fee paid to MISMO.

3.6 Requirement for MISMO[®] Education (Premiere Level only)

The Authorized Assessor will also assess whether Applicant's key personnel are sufficiently educated on MISMO best practices and the MISMO standards.

1. The Applicant may show that they are active within MISMO in general as volunteers and have internal MISMO based training or a train the trainer model.
2. The Applicant may show that key personnel have completed the highest level of MISMO education provided by MISMO. Key personnel include those individuals who operate on the software or tools directly. MISMO will not dictate roles or titles and assumes that each entity will have slightly different organizational and operating models.

3.7 Application and Payment

1. The Applicant will pay an application fee set forth in a table available at mismo.org. Funds must be remitted with the submission of Standard Level or Premiere Level Certification Application materials and Application Agreement.
2. The application will be reviewed for completeness and accuracy by MISMO staff. Any modifications must be made prior to the review process.
3. Applicants who successfully obtain the MISMO Compliance Certification must also pay an Authorization Fee to complete the process and then be allowed to call their products MISMO certified. A MISMO Compliance Certification Mark License Agreement must also be completed at that time in order for the certified Applicant to be able to use the appropriate MISMO Compliance Certification Mark(s).
4. Applicant has a period of one year from application submission to complete the processes required in either Standard Level or Premiere Level certification or the application fee is forfeited.



5. See Section 4 for additional information on the Application Process.

3.8 Renewal of Compliance Certification

Certification must be renewed on an annual basis. See Section 4 for renewal requirements.

4.0 The Software Certification Process

The Compliance Certification process for both Standard Level and Premiere Level certifications includes five parts:

- Application Process
- Assessment and Review
- Post Certification Process
- Appeal Process
- Renewal

Please refer to the Standard and Premiere Level Program Overview documents for detailed information on these certification processes.

5. Fees

The MISMO Software Compliance Certification Program Fee table is available on mismo.org and may change at any time in MISMO's sole discretion.

