Data Dictionary Certification Overview
v1.6.0

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1 Data Dictionary Certification Introduction

RESO Data Dictionary Certification is awarded to data providers that conform to current RESO Data Dictionary Standards.

This document contains a summary of RESO Data Dictionary Certification requirements and should be read by any organization who wants:

- To learn more about the Data Dictionary and its benefits;
- To create a Data Dictionary compliant data structure; and
- To have an understanding of the certification process.

1.1 What is the Data Dictionary? It's Real Estate's "Rosetta Stone"

The Data Dictionary serves as the real estate industry's "Rosetta Stone" for real estate data. Hundreds of MLS, and other source providers, gather data. **But what good is it if the data cannot be shared or understood?** The Data Dictionary ensures that each system "speaks" the same language. It is the common standard that defines real estate data in consistent terms and data structures; a template data providers should follow to format its most common fields.

1.2 Benefits of Data Dictionary Implementation

Simplified Data Integration: Data Dictionary structured data can move between systems without losing information; Data translation costs are reduced because of consistent data definitions and usage; and it is easier for MLS's, vendors and other third parties to develop new, data-driven applications and services that serve Realtors® across North America.

Quality Stamp of Approval: RESO Certification provides 3rd Party Verification of your client's functionality based on professional industry-wide standards.

Simplified Marketing: "RESO Certified Data Dictionary" says all you need to say about the interoperability of your online real estate information.

Promote support for Standards: Those receiving a RESO Certification may display the RESO Certified Logo on their website.

1.3 Detail Data Dictionary Certification Standards

This document is an overview of the detailed "Data Dictionary Certification Testing Rules" which can be found as a PDF on RESO.org. The detailed rules will be followed if any conflicts between the overview and the testing rules are discovered.

1.4 Glossary

The Data Dictionary Certification Glossary has a list of common terms used throughout the certification process. The glossary is available for download on RESO.org.

2 RESO Certification Department and Applications

Data Dictionary Certification begins with a submitted application. The certification process, testing tool instructions, compliance rules, and links to the Certification applications are found at http://www.reso.org/certification. Only host providers that initiate listing information (i.e. MLS) can apply for a Data Dictionary certificate.

The detailed Certification and Compliance Rules and Guidelines should be reviewed prior to submitting an application (available for download on **RESO.org).**

These are the steps applications follow through certification:

1: **Application Verification:** RESO reviews the application and verifies the information. The applicant must sign and return the RESO Trademark Agreement before testing begins.

2: **Compliance Testing:** RESO runs the appropriate tests for the applicant's data structure.

3a: **Certification Delivery:** Certificates are provided to Applicants whose data structures' meet the required standards.

3b: **Troubleshooting:** RESO will troubleshoot issues with those who do not qualify for a certificate.

2.1 RESO Online Application Forms

The online application gathers information for the certification process. **Payment of certification fees are required when the application is submitted.**

The **RESO Trademark Agreement** is sent to applicants after their application is submitted. The Trademark Agreement allows successful applicants to use the RESO official logos and certification badges.

2.2 Supplemental Application Information

The Supplemental Application Information provides details that cannot be submitted using the online form. This information may include but not limited to:

- A list of Data Dictionary fields that are mapped by the applicant but may not be fully compliant;
- A list of all known "Compliance Warnings" and "Compliance Notices" (*e.g. problems that the applicant might know prior to submission*) as defined in the detailed compliance rules, including a timeframe on when these warnings will be corrected;
- A list of Data Dictionary lookup values that are NOT located in the current Data Dictionary defined field;
- A list of Data Dictionary lookups values that appear more than once in the applicant's implementation. This only applies to those lookups with the same definition. Similarly named lookups with different definitions, based on locational context, do not need to be listed; or
- Any other information that the applicant would like to provide to RESO for evaluation.

2.3 Compliance Report Card

The Compliance Report Card shows applicants the testing results. Issues preventing certification will be included. Other non-complaint information not affecting certification will also be included. If requested, the Certification Department may advise applicants on corrective actions for discovered issues.

2.4 RESO Certificates

Details of those awarded certificates will have their information publicly posted at http://www.reso.org/certificates.

3 Data Dictionary Compliance Rules

Data Dictionary Compliance focuses on evaluating Data Dictionary fields found within the applicant's database. Applicant fields not found in the Data Dictionary are ignored. Data Dictionary fields not found in the Applicant's database are ignored.

3.1 Field-Level Compliance

Field-level compliance testing compares applicant's database fields with the Data Dictionary.

This table summarizes the five attributes of the data fields that will be evaluated. Only those field attributes addressed by the Data Dictionary will be evaluated.

An applicant's field **MUST** follow all applicable rules to be considered compliant. **Exact details of the field compliance rules are available for download on RESO.org)**

Field Attribute	Compliance Rules Summary
Field Name (a.k.a RETS 1x StandardName)	The applicant's field name **MUST** identically match the Data Dictionary StandardName when the definitions match. (See below for details on using different definitions.)
Data Type	The Data Dictionary provides a "Simple Data Type" for each field. The corresponding field within the applicant's database **MUST** be a logical match. The exact physical representation **MAY** vary. Some Data Type conversions **MAY** result in a "Cautionary Warning." (*See examples after table.*)
Precision	The applicant's data field precision **SHOULD** match the decimal value in the Data Dictionary "Sug. Max Length" column. Differences found will be marked with a "Cautionary Warning."
MaximumLength	The applicant MaximumLength field **SHOULD** be equal to or less than the "Sug. Max Length" found in the Data Dictionary. Lengths greater will be a "Cautionary Warning."
Lookups (a.k.a Enumerations)	The applicant's lookup item **MUST**: ● Match the Data Dictionary lookup value exactly; and ● Be found in the same lookup field as defined in the Data Dictionary. Synonyms or spelling variations are not allowed. Placement in other locations may result in non-compliance or a warning. External validation **MAY** be used.

Field Names and Definitions: Special considerations will be made when comparing the applicant's field names and definitions with those found in the Data Dictionary.

- Fields with SIMILAR definitions and MATCHING StandardNames are compliant.
- Fields with SIMILAR definitions and DIFFERENT StandardNames are NOT compliant. In this situation, the StandardName MUST be changed to match the Data Dictionary to be compliant. Only the StandardName needs to be changed for compliance.
- Fields with DIFFERENT definitions and MATCHING StandardNames are allowed but MUST be listed in the Supplemental Application Information. **For example:** An applicant's "Subdivision" field has a different definition than the Data Dictionary.
- Fields with DIFFERENT definitions and DIFFERENT StandardNames are ignored.

Logical v. Physical Data Type Examples:

- Data Dictionary Booleans allows for true/false/NULL. A data structure may represent that physically with 1/0, Y/N, Yes/No, T/F, True/False, or by not providing data. It **SHOULD NOT** have more than the two choices. Providing a specific value to represent a non-response, like "None" OR "N/A," is allowed in lookups, along with the null value (e.g. no entry) in other data types.
- A Data Dictionary "Number (Whole)" **MAY** be any field that represents a whole number (e.g. Int, Long, Small, or Tiny). It **MAY NOT** be a Decimal or String.

Data Formatting: Compliance testing will **NOT** take field formatting into account (i.e. Parcel number, Phone numbers).

3.2 Compliance Warnings

Compliance Warnings are given when discrepancies between the applicant's implementation and the Data Dictionary but are not severe enough to warrant disqualification. **Compliance Warnings must be fixed within a specified time period to retain future certifications.**

Exact details of the compliance warnings are available in the Data Dictionary Certification Testing Rules on RESO.org.

3.3 Compliance Notices

Compliance Notices, like warnings, are given when discrepancies between the applicant's implementation and the Data Dictionary but are not severe enough to warrant disqualification. **There are no deadlines for Compliance Notices to be fixed.**

Exact details of the compliance warnings are available in the Data Dictionary Certification Testing Rules on RESO.org.

4 Data Dictionary Certification Rules

Data Dictionary Certification is awarded on:
1. How many applicant fields are Data Dictionary compliant; and
2. If all "Core Fields" are compliant (*see below for 'Core Fields' definition*).

4.1 Data Dictionary Core Fields

Data Dictionary Core fields are those fields that, when found in the applicant's database, **MUST** be compliant. Applicant's are not required to implement core fields outside their business needs.

Applicants are strongly encouraged to have all of its fields Data Dictionary compliant (Core and Non-Core).

 A list of the Data Dictionary Core Fields are available in on the Data Dictionary Wiki (http://ddwiki.reso.org/).

4.2 Data Dictionary Certification and Compliance Levels

Different Data Dictionary Certification levels have been defined to recognize those who implement more than the minimum requirements. These higher levels are named after different precious metals: Bronze, Silver, Gold, and Platinum. The minimum certification is named "Core."

Data Dictionary "Core" Certification is the minimum level of requirements that **MUST** be satisfied to receive certification.

1. All Data Dictionary Core Fields found **AND** mapped within the applicant's system **MUST** be found compliant.
2. Core Fields found within the applicant's Data Dictionary implementation that is **NOT** mapped or found to be compliant will prevent certification.

The Data Dictionary Certification will have multiple levels. This is an effort to provide additional recognition to those who implement more than the minimum requirement. Certification rules for each of these levels are documented in the Data Dictionary Certification Testing Rules on RESO.org.

The minimum compliance levels required to receive a Data Dictionary Certificate will change based on the year the application is tested:

- **Starting January 1st, 2015,** a Data Dictionary Certificate can be awarded for achieving the CORE compliance level or higher.
- **Starting January 1st, 2017,** a Data Dictionary Certificate can be awarded for achieving the BRONZE compliance level or higher.
- **Starting January 1st, 2018,** a Data Dictionary Certificate can be awarded for achieving the SILVER compliance level or higher.
- **Starting January 1st, 2019,** a Data Dictionary Certificate can be awarded for achieving the GOLD compliance level or higher.
- **Starting January 1st, 2020,** a Data Dictionary Certificate can be awarded for achieving the PLATINUM compliance level.