

Data Integrity + Transparency

Empowerment

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Data Standards

Standards are fundamental to the efficient, accurate and seamless exchange of data.

Many competing standards exist for serializing, parsing, and describing data.

The purpose of an **Open Standard** is to support common agreements that enable communications open to all.

Open Standard Defined

The term Open Standard implies there are no fees associated with the use of the standard and that the standard is **governed** by a formalized, not-for-profit organization.

Note:

Many specifications that are sometimes referred to as standards are proprietary & only available under restrictive contract terms (if they can be obtained at all) from the organization that owns the copyright on the specification.

Open Standard Benefits

A comprehensive, consistent and repeatable framework of data definition empowers the marketplace to drive innovation in services and technology.

Governance provides guidance, stewardship and transparency enabling trust in the data and promoting interoperability between multiple constituents.

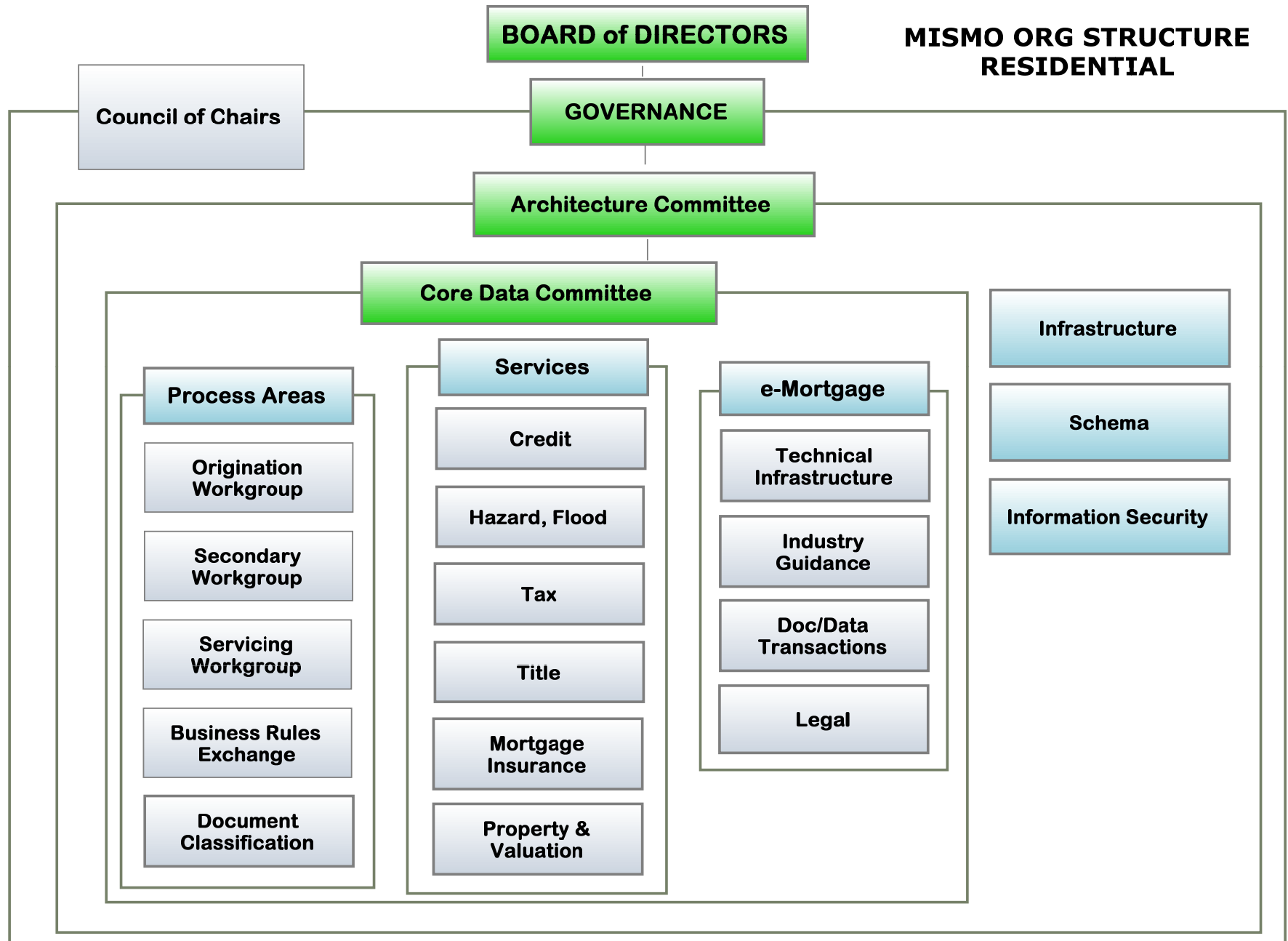
MISMO VALUE PROPOSITION

MISMO is an open data standards group that promotes consistency among mortgage transaction participants, which in turn reduce processing costs, increase transparency, and ultimately boost investor confidence in mortgages and real estate as asset classes.

WHAT MAKES IT OPEN?

MISMO is managed by a non-profit organization, supported by cross-industry volunteer workgroups and governed by policies protecting the intellectual property and preventing anti-trust issues and copyright claims.

**MISMO ORG STRUCTURE
RESIDENTIAL**



Industry Cross-Section of Experts

Property and Valuation Services Workgroup
volunteers are:

- ✓ Seasoned Appraisers (from both the field, intermediaries and lenders)
- ✓ Collateral Policy representatives from lenders, end-investors and the GSEs
- ✓ Technologists (appraiser software providers, management platform providers, MLS organizations)

Property & Valuation Services

RELEASE STATISTICS

Valuation Response v2.4 XML DTD – Released July 2006
(supports all GSE standard forms)

Valuation Response v2.6 – Released March 2010
(7 additions & 37 modifications)

Valuation Response v3.1 – Candidate Release July 2010*
(all GSE forms PLUS hundreds of new data points)

** Scheduled Opening of Public Comment Period - this is the initial step in the path to a release and allow MISMO to gain feedback and implementation experience.*

MISMO Version 3

Fully-fledged W3C XML schema

(Namespaces, datatypes, constraints, etc.)

Single data repository/reference model

(LDD, engineering & implementation guides)

Resolves differences between process areas

(Borrower, Property Description...)

Consistent message structure supports all

(Loan, Collateral, Party, etc.)

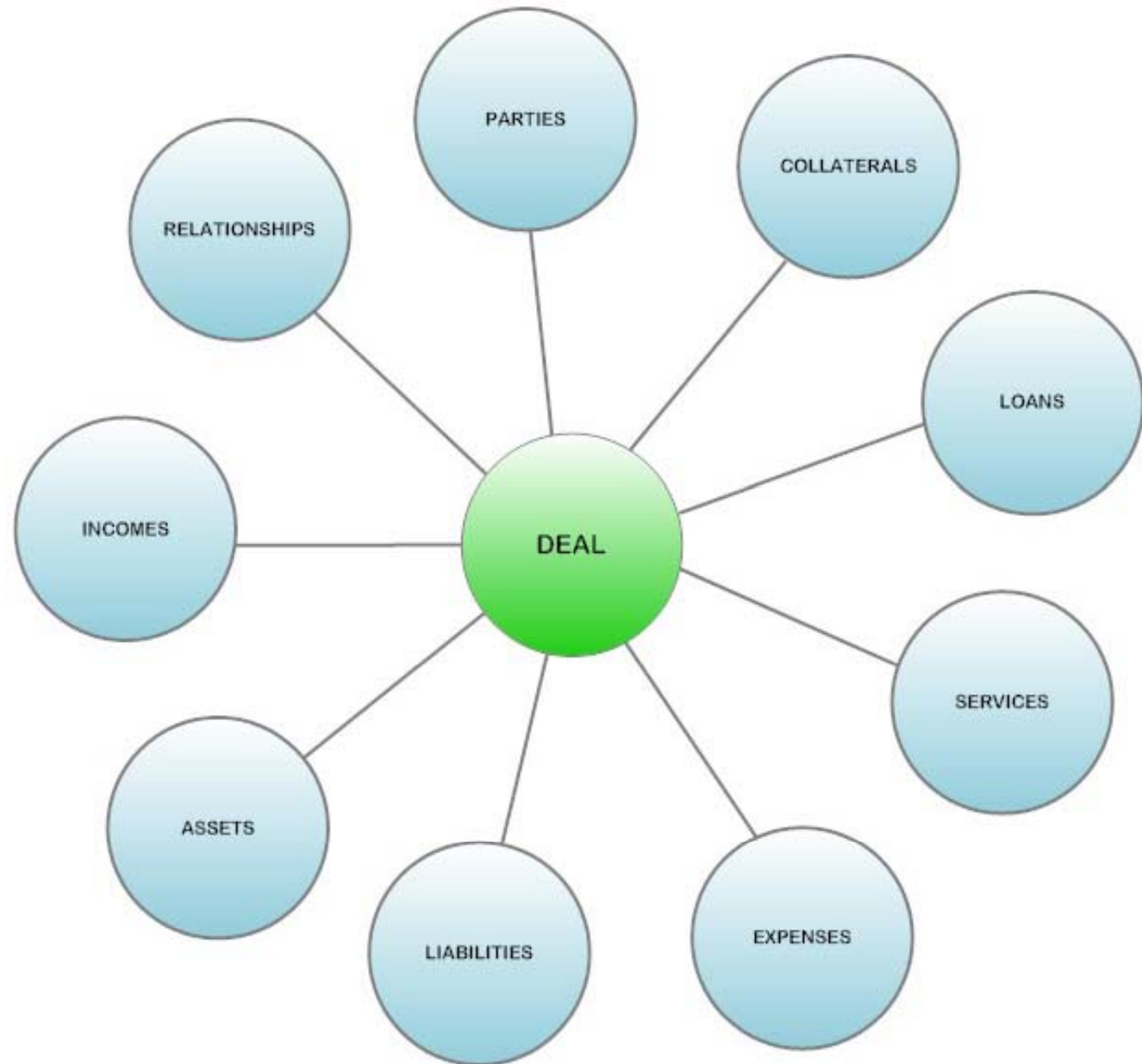
Format vs. Reference Model

A format structure (e.g. DTD) implies a level of rigidity in how the data elements must be ordered as well as named and syntax guidelines for how to express numbers, dates, currency and media and enumerations.

A **reference model** enables data exchange cooperatively at a semantics level or the meaning of the data.

MISMO v3.1 Reference Model:

A
Mortgage
Loan
Universe



Not Just for Technologists

The **reference model** facilitates better communication between people; it provides explicit recognition of concepts that many people already share, but when created in an explicit manner, a reference model is useful by defining how these concepts differ from, and relate to, one another.

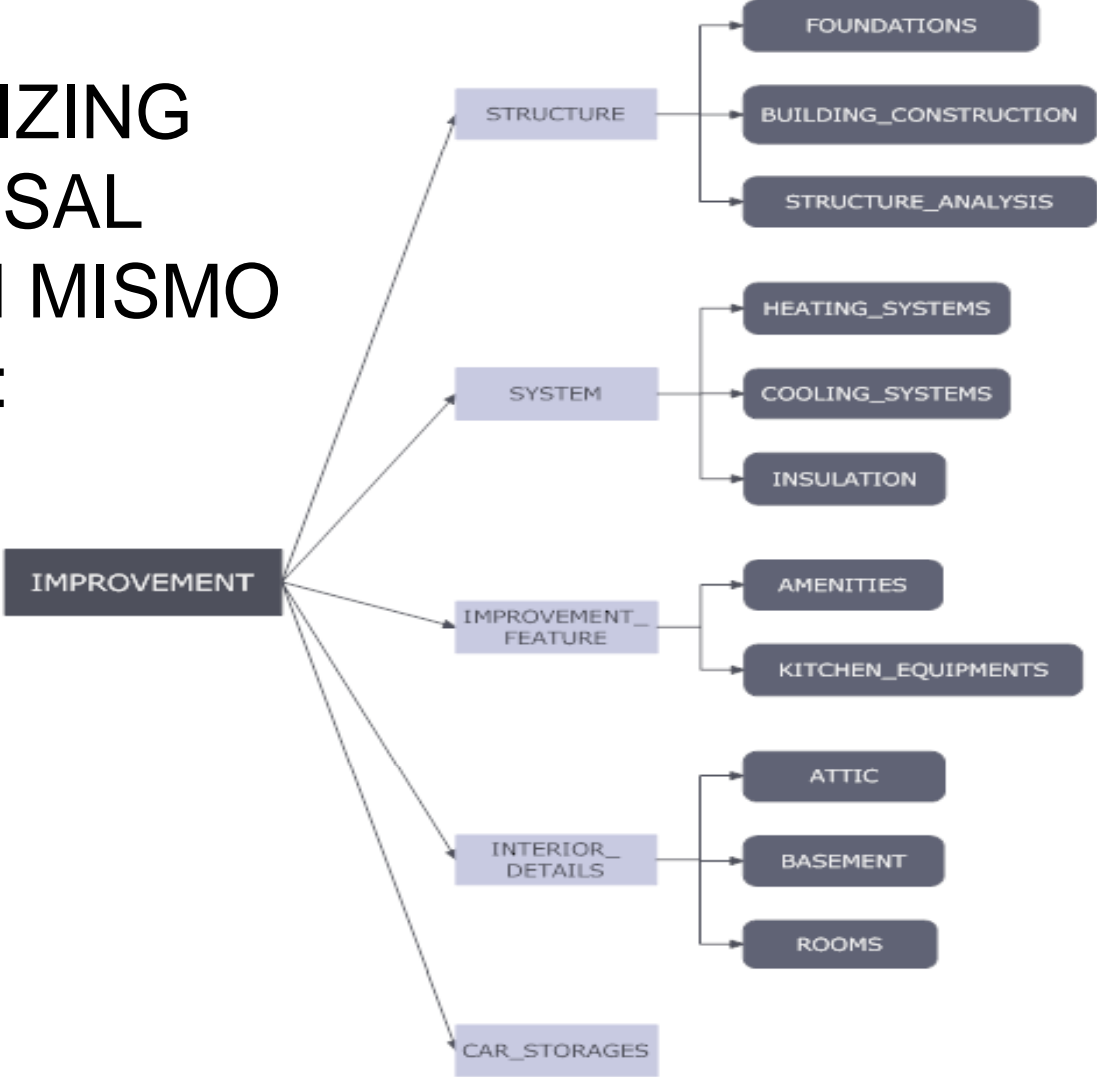
Common ground through terminology and semantic preciseness.

...from the field to the stream

MISMO version 3.1 represents a dramatic improvement in the ability to clearly communicate appraisal details from the professional appraiser in the **field** to the mortgage data **stream**.

The common reference model eliminates the need for data translations and transformations thereby reducing risk and increasing transparency.

VISUALIZING APPRAISAL DATA IN MISMO TERMS:



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egreen 3/31/2010

A New Level of Detail

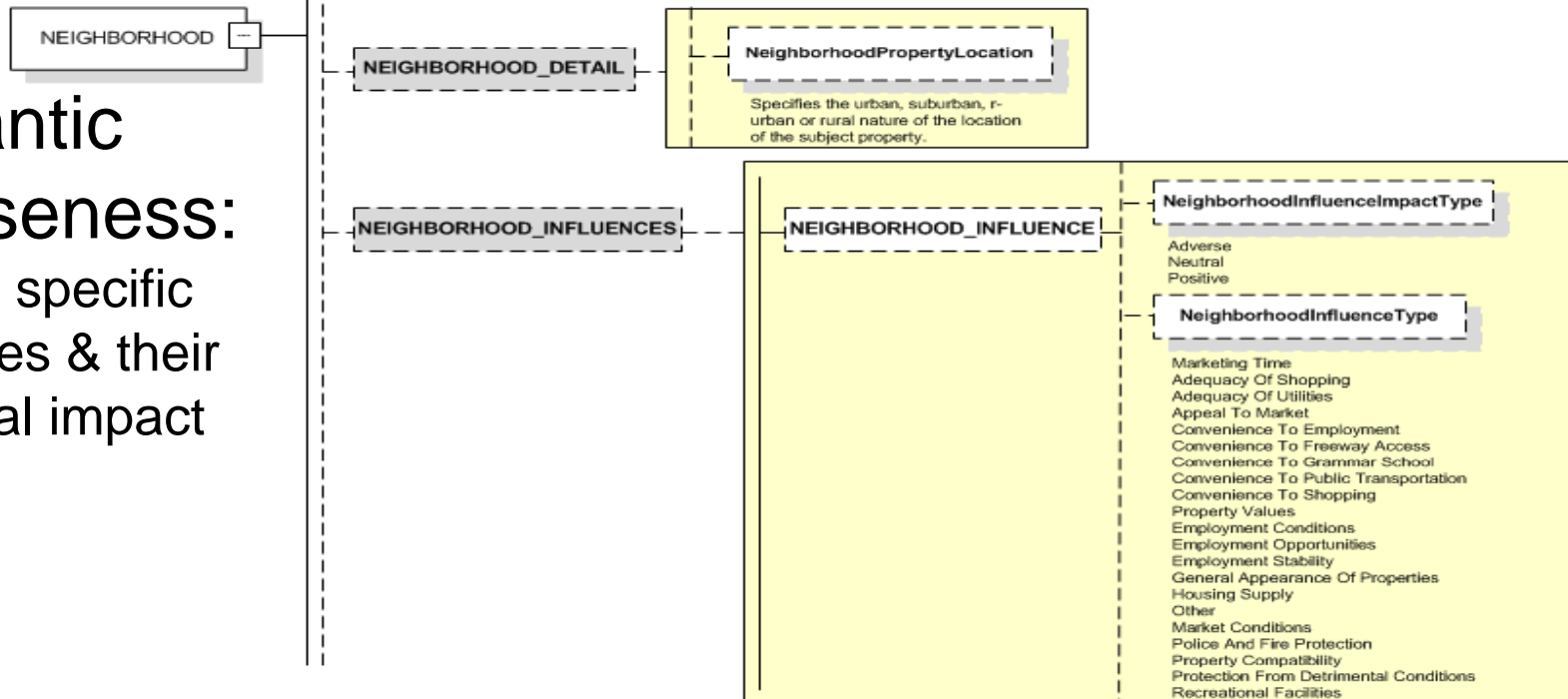
v2.6: - if more than one entry, use "OtherDesc..."

```

xs:attribute name="PropertyNeighborhoodLocationType">
xs:simpleType>
xs:restriction base="xs:token">
xs:enumeration value="Urban" />
xs:enumeration value="Suburban" />
xs:enumeration value="Rural" />
</xs:restriction>
</xs:simpleType>
</xs:attribute>
xs:attribute name="PropertyNeighborhoodLocationTypeOtherDescription" />
    
```

v3.1

**Semantic
Preciseness:**
Capture specific influences & their individual impact



HD for Comparables

A significant improvement in MISMO v3.1 is the ability to express a comparable property using the same data structures available to the subject using an indicator at the Property level to indicate Subject or Comparable.

Condition, quality, rating along with descriptions and adjustments are now available at the item level.

High resolution of comparable detail dramatically improves appraisal quality and reduces questions and concerns.

SECURITY & TRANSPARENCY

The MISMO data standard is designed to facilitate data security, ownership tracking, and source recognition down the individual data point level.

With the adoption of data standards, appraisers, client/lenders and investors can not only take control of their data, it can be protected and tracked. Even data from a pdf extract can be applied to the Version 3.1 data standard and a “**data footprint**” created.

DATA INTEGRITY

Data integrity is everyone's responsibility. Not just the appraiser bound by USPAP to not provide a misleading report.

All producers and consumers of appraisal data bear a responsibility to safeguard confidential information, uphold the contractual boundaries under which the data was obtained and offered, and most importantly to ensure that data is not mangled, misused or misrepresented in a way that causes harm.

MISMO v3 Security Features

Built-in “SMARTdoc” framework that enables easier application of e-signatures with the ability to tightly bind data to documents.

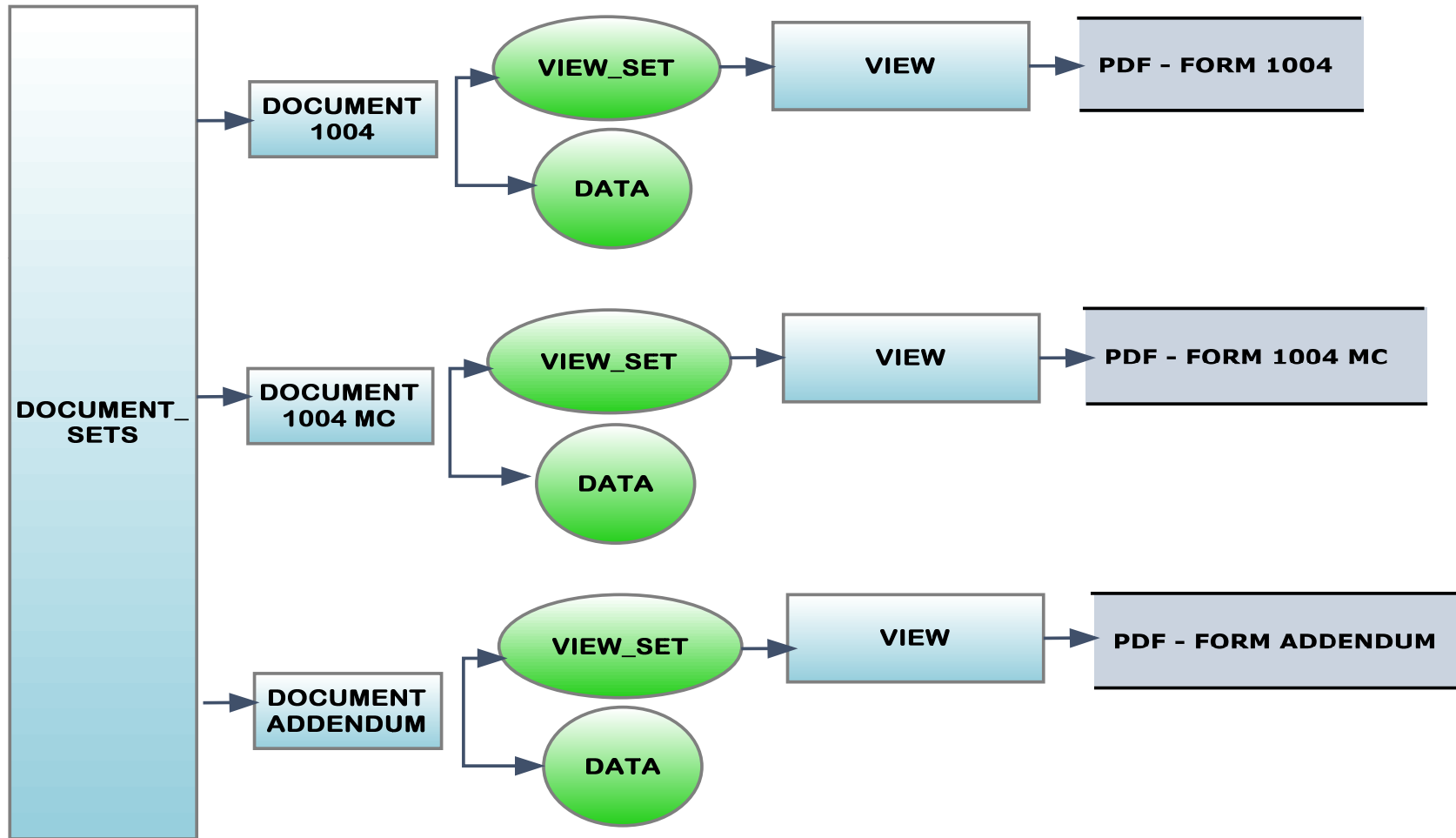
XML message can be wrapped with a truly digital signature such as PKI. This means that the receiver of the v3 appraisal file in v3 can programmatically read the hashed signature on the file and detect if the file has been tampered with.

Encryption is now available at the data point level, such as an Appraiser’s License Number, creating a new level of security.

Bind Data Directly To Form

USE CASE: Appraiser to Client (AMC)

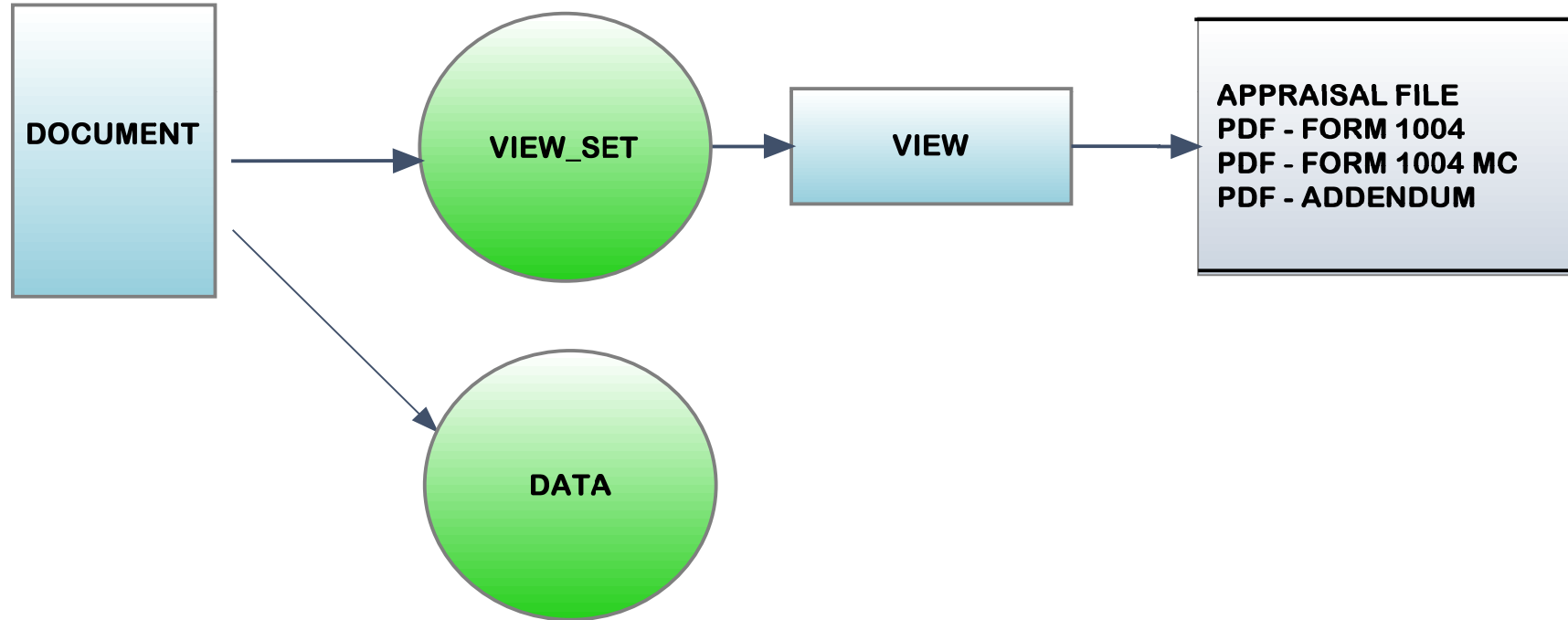
Valuation Response Message with one data packet per form (in a PDF Collection).



View as a Collection

USE CASE: Delivery to End-Investor

Valuation Response Message with one data package for all forms transaction file and one view for the collection of PDF forms delivered as a single PDF.



Putting the Standard to Work

MISMO provides the data framework for common terminology and data presentation.

Businesses how to apply the data framework through deployment in daily business use, services and automated systems.

The possibilities to create new and improved services that can seamlessly co-exist with current business requirements can now be driven by market demand and commercial enterprises; breaking the forms land-lock.

A Bright Future

MISMO v3.1 enables a more thorough, transparent and reliable communication of the appraisal by removing format barriers.

This is the foundation for a future of appraising which transcends simply keying data into forms to communicating data-centric, professional appraisal analysis and opinion.

Thank-you!

Join us:

MISMO Property & Valuation Services Workgroup

<http://www.mismo.org/getting-started/listserv-sign-up.html>