

NEW YORK STOCK EXCHANGE, INC.  
MARKET DATA DIVISION

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Vendor Reporting eXtensible Markup Language (VRXML)

June 2004

Version 1.1

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## ABSTRACT

The purpose of this document is to provide a description of the file based reporting language for the Market Data division of the New York Stock Exchange, Inc. (NYSE). The NYSE preferred reporting method is now the Vendor Reporting eXtensible Markup Language (VRXML). VRXML has become an industry standard with the help of the FISD and the VRXML Steering Committee.

## OVERVIEW

Traditionally, vendors fulfilled their reporting obligations by uploading their “VARS” files. The group at TCBDData would receive these files, provide a level of processing and extraction, and then disperse the files to the appropriate markets including NYSE Market Data. The Market Data staff members would then review the files for completeness.

The NYSE announced in 2001 that it intended to add choice and efficiency to the current reporting practices. The NYSE’s plans included the following:

1. Establishing a NYSE facility to accept vendor reports directly as well as from VARS files. (Completed 12/2001)
2. Transitioning from current “transaction change” reporting to total inventory reporting. (Completed in 2003)
3. Developing value-added administrative services for vendors and their customer. (Ongoing effort)
4. Developing more efficient, industry-accepted data transfer methodologies to enable straight-through-processing.

In June of 2002 the NYSE, in conjunction with Gemini Systems, Inc. (<http://www.gemini-systems.com>), released a proposed Vendor Reporting eXtensible Markup Language (VRXML) schema. Working with the FISD, comments and feedback were collected from other exchanges and vendors. The response was tremendous and the comments and feedback were very well thought out and articulated. With this information the NYSE was able to create and publish version 1.0 of the VRXML schema in December of 2002. The VRXML Steering Committee established a few minor extensions, which have led to version 1.1 of the VRXML schema, published in June 2004.

## VRXML STRUCTURE

The XML structure is a format that the Market Data division of the NYSE has developed. The name of this new structure is Vendor Reporting eXtensible Markup Language (VRXML). The XML structure is based upon the original VARS format but adds additional functionality and efficiency. The capability to transform an existing VARS file into a VRXML file is a requirement that has been addressed in the design of the VRXML schema.

### Primary Elements:

- File Descriptor: Provides information about the file itself
- Vendor Entry: Represents company, contact, and location information for a vendor
- Inventory Entry: Represents one location's set of inventory elements for a company (subscriber or vendor)
- Subscriber New Entry: Represents information about a new subscriber for the reporting vendor
- Subscriber Change Entry: Represents changes to subscriber information including company changes, location changes, and new locations for that subscriber

### Rules:

- Each file will have one File Descriptor
- Each file will have at least one other primary element (Vendor, Inventory, Subscriber New, or Subscriber Change)
- Each file will conform to the VRXML Schema

**VRXML TYPE  
DESCRIPTIONS**

**VRXML**

<b>Elements</b>	<b>Type</b>	<b>Allowable Entries</b>	<b>Comment</b>
File Descriptor	File Descriptor	1..1	Described Below
Vendor Entry	Vendor Entry	0..1	Described Below
Inventory Entry	Inventory Entry	0..m	Described Below
Subscriber New Entry	Subscriber New Entry	0..m	Described Below
Subscriber Change Entry	Subscriber Change Entry	0..m	Described Below

**File Descriptor**

<b>Field Name</b>	<b>Type</b>	<b>Allowable Entries</b>	<b>Comment</b>
Vendor ID	String	1..1	Unique identification of a Vendor
Receiver ID	String	0..1	Unique identification of the receiving entity
Date File Created	Date	1..1	Standard xsd datetime format
Entry Meta Data	Entry Meta Data	0..m	Described Below

**Inventory Entry**

<b>Field Name</b>	<b>Type</b>	<b>Allowable Entries</b>	<b>Comment</b>
VAN	String	0..1	Vendor Account Number; uniquely identifies the location for a set of products; mandatory if not implied within a new location
Product	Product	1..m	List of products with inventory information for this location; Described Below

**Vendor Entry**

Field Name	Type	Allowable Entries	Comment
Company	Company	0..1	Changes to company information; Described Below
Billing Address	Address	0..1	Changes to the vendor's billing address; Described Below
Contact	Contact	0..m	Changes to vendor's contacts; Described Below
Location New	Location New	0..m	New locations for this vendor; Described Below
Location Change	Location Change	0..m	Changes to vendor's locations; Described Below

**Subscriber New Entry**

Field Name	Type	Allowable Entries	Comment
Billing Address	Address	0..1	Billing address information; Described Below
Contact	Contact	0..m	Changes to vendor's contacts; Described Below
Company	Company	1..1	Company information; Described Below
Location New	Location New	1..m	Must contain at least one new location for a subscriber; Described Below

**Subscriber Change Entry**

Field Name	Type	Allowable Entries	Comment
REFVAN	String	1..1	Vendor Account Number, references one of the VAN's that exist for this subscriber; Only accurate way to uniquely identify a subscriber
Billing Address	Address	0..1	Billing address information; Described Below
Contact	Contact	0..m	Changes to vendor's contacts; Described Below
Company	Company	0..1	Changes to existing subscriber's company information; Described Below
Location New	Location	0..m	New Locations for the

	New		subscriber; Described Below
Location Change	Location Change	0..m	Changes to a subscriber's locations; Described Below

**Location New**

Field Name	Type	Allowable Entries	Comment
VAN	String	1..1	Vendor Account Number
Contact	Contact	0..1	Described Below
Comments	String	0..1	Extra information about the new location
Locals	Location Locals	1..1	Local information, Described Below
Inventory Entry	Inventory Entry	1..1	Described Above

**Location Change**

Field Name	Type	Allowable Entries	Comment
VAN	String	1..1	Vendor Account Number
Contact	Contact	0..1	Changes to the location's contact; Described Below
Comments	String	0..1	Extra information about the location's change
Locals	Location Locals	0..1	Changes to local information, Described Below

**Location Locals**

Field Name	Type	Allowable Entries	Comment
Address	Address	1..1	Described Below
Company	Company	0..1	Described Below

**Contact**

Field Name	Type	Allowable Entries	Comment
Action Code	String	1..1	Indicates the intent of this contact entry
Contact Type	String	0..1	Code for type of contact (i.e. Primary Reporting, Billing, etc.)
Person	Person	0..1	Described Below
Address	Address	0..1	Described Below

**Product**

Field Name	Type	Allowable Entries	Comment
Action Code	String	1..1	Indicates the intent of this product entry; NOTE: If all products are marked inactive then the Location will be marked inactive as well
Product Code	Product Code	1..m	Described Below
Inventory	Inventory	1..m	Described Below
Effective Date	Date	0..1	Indicates the date that this action is to be taken

**Product Code**

Field Name	Type	Allowable Entries	Comment
Code Owner	String	1..1	The issuer of the code (i.e. VEN, EXG)
Code	String	1..1	

**Company**

Field Name	Type	Allowable Entries	Comment
Name1	String	1..1	Name of the company
Name2	String	0..1	Second line of the name of company
Comments	String	0..1	Comments associated with the company

**Address**

Field Name	Type	Allowable Entries	Comment
Address1	String	1..1	
Address2	String	0..1	
Address3	String	0..1	
City	String	1..1	
State Province	String	0..1	Optional but must be a valid 2 or 3 character state code, Mandatory for US and Canada



Region	String	0..1	Used for countries outside the US and Canada
Postal Code	String	1..1	
Country	Country	1..1	Must be a valid 2 or 3 character country code

**Person**

Field Name	Type	Allowable Entries	Comment
Full Name	String	0..1	Used to support VARS format
First Name	String	0..1	
Middle Name	String	0..1	
Last Name	String	1..1	
Salutation	String	0..1	
Suffix	String	0..1	
Title	String	0..1	Business title
Phone Number	String	0..1	
Email Address	String	0..1	
Fax Number	String	0..1	

**Inventory**

Field Name	Type	Allowable Entries	Comment
Effective Date	Date	1..1	The month and year for this inventory element
Quantity	Integer	1..1	Reported Quantity
Comments	String	0..1	Comments for this inventory element

\* Updates to prior months inventory can be made using the effective date

**ACTION CODES**

Contact Action Codes:

ADD	Add New Contact
UPD	Change Existing Contact
DEL	Remove Existing Contact

Product Action Codes:

ADD	Add New Product to Location
UPD	Update Existing Product Inventory
DEL	Deactivate Product From Location (An Inactive Product)

**CONTACT TYPES**

Contact Types Descriptions:

BL	Billing
DL	Distribution List
LO	Location
PR	Primary Reporting
RP	Reporting

**PRODUCT CODE OWNERS**

Product Code Owner Descriptions:

EXG	Exchange
SUB	Subscriber
VEN	Vendor

**APPENDIX A:  
ENHANCEMENTS  
FROM PREVIOUS  
VERSIONS**

**Version 1.1 release**

The latest release of VRXML is version 1.1. The following modifications have been made since the publication of VRXML 1.0.

**Withdrawn Elements:**

- none

**Replaced Elements:**

- none

**New Elements:**

- **Receiver Id** (Optional Attribute for identifying the receiver of the file)

**Other Extensions:**

- **Data types were added to enforce the mandatory data elements and attributes**

**Version 1.0 release**

The following modifications have been made since the pre-release publication of VRXML 1.0.

**Withdrawn Elements:**

- **CustomDateTime**: Replaced by the use of an ISO 8601 dateTime format.
- **CustomTimeString**: Replaced by the use of an ISO 8601 dateTime format.

**Replaced Elements:**

- **Report**: Element name changed to VRXML.
- **Vendor Change Entry**: Element name changed to Vendor Entry.

**New Elements:**

- **Subscriber Entry** (Abstract entity above subscriber new and subscriber change elements)
- **Location** (Abstract entity above location new and location change elements)
- **Location Locals** (Level above address that includes a company element)
  - Element Address identifies the address information.

- Element Company identifies the company information related to the address.
- **Entry Meta Data** (Contains type and count to abstract check sums in the File Descriptor)
  - Attribute Entry Name is a string identifying the type of entry.
  - Element Count is an integer representing the number of the specified entry types that exists within the file.
- **Product Code** (contains the code and the founder of the code)
- **Person** (subset of the prior released version of a contact, excluding the address element)
  - Added element suffix for support outside the NYSE

**Modified Elements:**

- **VRXML:** No changes made.
- **File Descriptor:**
  - Removed Vendor Change Entry Count and abstracted it's use into an Entry Meta Data element that will include this count.
  - Removed Inventory Entry Count and abstracted it's use into an Entry Meta Data element that will include this count.
  - Removed Subscriber New Entry Count and abstracted it's use into an Entry Meta Data element that will include this count.
  - Removed Subscriber Change Entry Count and abstracted it's use into an Entry Meta Data element that will include this count.
- **Inventory Entry:** No changes made.
- **Vendor Entry:** The Contact Change element has been replaced with a Contact element that now includes an action code to further define the contact.
- **Subscriber New Entry:** The Contact element has been added that includes an action code to further define the contact.
- **Subscriber Change Entry:** The Contact element has been added that includes an action code to further define the contact.
- **Product:**
  - Added the element Product Code. Adds the ability to identify the code owner and the value of the code.
  - Removed the element Vendor Product Code. That functionality is now available using a Product Code.
  - Removed the element Exchange Product Code. That functionality is now available using a Product Code.
- **Location New:** The element Address has been replaced with Locals and is of type Location Locals -- which composes an Address with a Company data structure.
- **Location Change:** The element Address has been replaced with Locals and is of type Location Locals -- which composes an Address with a Company data structure.
- **Inventory:** Attribute Effective Date is now an Element.
- **Address:**

- Removed the element Local Company Name1. That functionality is now available using a Location Local.
- Removed the element Local Company Name2. That functionality is now available using a Location Local.
- Attribute Country is now an Element.
- The element State is now labeled as State Province to clarify its effective use.
- The new element Region is available for countries outside of the US and Canada for specifying region names.
- **Company:** No changes made.
- **Contact:**
  - Removed all of the Person related fields and replaced them with a Person element.
  - Contact Type is now an optional field to allow for implied contact types if embedded within other elements.
  - The new element Action Code is available to eliminate the need for a Contact Change element.

### Version 1.0 pre-release

The pre release of VRXML 1.0 noted several changes. The following modifications have been made since the draft publication of VRXML 0.6 in June of 2002.

#### Withdrawn Elements:

- **Vendor Contact Change:** Replaced by Contact Change.
- **Vendor Location Change:** Merged with Location Change.
- **Billing Change:** Not required because it only contains an Address.

#### New Elements:

- **Contact Change** (Replaces Vendor Contact Change)
  - Element Action Code identifies the intended change to be made.
  - Element Contact identifies the contact information to be changed.

#### Modified Elements:

- **Report:** No changes made.
- **File Descriptor:** No changes made.
- **Inventory Entry:** VAN is now an optional attribute due to the implicit nature of the value if it is embedded within a new Location element. Otherwise it is a mandatory field not enforced within the schema.
- **Vendor Change Entry:**
  - Changed the name of the element Vendor Location Change to Location Change due to the withdrawal of the Vendor Location Change element and its merging with the Location Change element.
  - Changed the name of the element Vendor Contact Change to Contact Change due to the withdrawal of the Vendor Contact Change element and the move to the new reusable Contact Change element.
  - Changed the name of the element Billing Change to Billing Address due to the withdrawal of a Billing Change element.
- **Subscriber New Entry:**
  - Billing Address is now an optional element.
- **Subscriber Change Entry:**
  - Changed the name of the element Billing Change to Billing Address due to the withdrawal of a Billing Change element.
- **Product:**
  - Changed the name of the element NYSE Product Code to Exchange Product Code to conform to other exchanges.
  - Added an Action Code element to enhance the capability to cancel products for a location as well as report for them.
  - Added an Effective Date element that indicates the date when this action on the product is to occur or be should have occurred.
- **Location New:**
  - Added the attribute VAN to uniquely identify the new Location.

- Changed the element Inventory Entry to only allow one instance.
- Added the element Contact as an optional element that identifies the contact for the new Location.
- Added the element Comments to allow Vendors to submit comments with a new Location.

➤ **Location Change:**

- Added the attribute VAN to uniquely identify the Location to be changed.
- Withdrew the element Inventory Entry, to make a Inventory Entry for a Location use an Inventory Entry within the Report element. This was a redundant route to report for a location.
- Added the element Contact as an optional element that identifies the contact for the Location.
- Added the element Comments to allow Vendors to submit comments with a Location change.

➤ **Inventory:** No changes made.

➤ **Address:**

- Changed the country attribute to be mandatory.
- Changed the postal code element to be mandatory.

➤ **Company:** No changes made.

➤ **Contact:**

- Changed the full name element to be optional.
- Changed the last name element to be mandatory.

➤ **Custom Date Time:** No changes made.

➤ **Custom Time String:** No changes made.

**APPENDIX B:  
VRXML  
CONCEPTUAL  
MODEL**

<< Insert VRXML Conceptual Model >>



**APPENDIX C:  
VRXML SCHEMA**

<< Insert Sample VRXML Schema >>

**APPENDIX D:  
SAMPLE VRXML  
FILE**

<< Insert Sample VRXML file >>