Organization Structure Metamodel (OSM)

2nd Initial Submission

In Response to: Organization Structure Metamodel RFP
(OMG Document bei/2004-06-05)

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Jointly Submitted by (in alpha order):

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0 Submission-Specific Material

This section contains submission-specific information to support the evaluation process for this submission. This entire section will be removed from the final specification. It provides the context in which the submission should be considered. Subsequent sections constitute the specification being submitted. This section contains the following sub-sections:

- Guide to the Submission
- Background
- Design rationale
- Co-submitting and supporting organizations
- Statements of proof of concept
- Responses to specific RFP requirements

0.1 Guide to the Submission

The specification being submitted begins with Section 1. This submission contains the following major sections:

- **Submission-Specific Material.** This Section 0 contains information about the approach taken to the specification, the submitting and supporting organizations, proofs of concept, and responses to specific RFP requirements.

- **Introduction.** This is the introduction to the specification and describes the objectives, scope, conformance requirements, information about related specifications, definitions and credits.

- **Overview.** This section describes the specification for a general understanding of the concepts and how they fit together.

- **OSM Metamodel.** Details the metamodel specifications with descriptions of the elements and their relationships.

- **Rules Extension.** This extends the OSM Metamodel to define the use of SBVR rules to further define an organization structure and associated business rules.

- **Annexes.** This contains a glossary of terms and examples used to illustrate and validate OSM concepts.
The sections containing the overview, OSM metamodel, rule extensions to the metamodel, and the Glossary are normative.

0.2 Background

The organizational structure is a fundamental aspect of the design of an enterprise. It defines the relationships between people to support specialization and coordination of work. Traditional organizations relied primarily on a hierarchical structure with working relationships and communications occurring primarily through the hierarchical relationships. Traditionally, job titles were tightly linked the hierarchical structure. Modern enterprises have a variety of relationships in order to operate more efficiently and responsively. People need to identify appropriate contacts elsewhere in the organization in order to do their jobs efficiently and effectively. People may have job titles that do not imply any particular place in a hierarchy. People may have responsibilities to different parts of the organization. Such is the case in matrixed relationships and cross-organizational task forces. In addition, modern enterprises have more integrated relationships with other enterprises in extended enterprise relationships.

The traditional hierarchical organization chart no longer meets the needs of organizational design or of guiding the day to day operation of the enterprise.

In addition, the organization structure is a factor in the operation of a variety of information systems including human resources systems, payroll and accounting systems, business process/workflow systems, security systems, and so on. These systems require a consistent representation of the organization structure in order to function properly. They also require the ability to differentiate an individual’s place in the organizational structure from the same individual’s payscale information, and job title. In many enterprises, this need is addressed by a variety of organizational directories that each require administrative effort to be kept up to date and aligned.

Managers need to be able to develop robust models of their organizations, and then deploy these models to production environments where the information can be shared by many people and systems. The models should be sharable in different modeling tools, and the run-time directories should provide access to standard information to support the various systems.

One respect in which past organizational models have failed to be robust, is that they have typically been assumed to be based on a single global scheme, at least within any one entity. In practice, we find today that geographically based organization by “region and district,” market based organization (perhaps as “retail and wholesale”, or “government and corporate”) and product based organization, coexist within one corporate entity. We propose that models should recognize that different, and potentially orthogonal, organizational schemes may co-exist within one entity.

0.3 Design Rationale

Job title. Job title from position
Position. Position from organization

Assignment. Assignment from position

Legal entity. Legal entity for business partners

Organization evolution. Effective dates

Organizational schemes. Allow coexistence of a variety of schemes within one entity

Rules. Rules for expression by business people, interpretation by tools and processes

Compliance levels. Extension to enable tools without rules

0.4 Co-Submitting and Supporting Organizations

The following paragraphs identify the submitting organizations and organizations that have supported the development of this specification

0.4.1 Co-Submitting Organizations

- Adaptive
- EDS
- 88Solutions
- Borland Software
- Lombardi Software
- Data Access Technologies

0.4.2 Supporting Organizations

- Unisys

0.5 Submission Contact Persons

The following persons represent the submitter and supporter organizations:

Fred Cummins, EDS
Email: fred.cummins@eds.com

Manfred Koethe, 88Solutions
Email: koethe@88solutions.com
0.6 Statements of Proof of Concept

The submitters have experience in business consulting, strategic planning, business process modeling and directory management that provide an understanding of the modeling requirements, and they have experience in the design of metamodels and development of tools to support modeling.

0.7 Responses to specific RFP Requirements

[These will be completed when the specification is more complete.]

The following tables provide a cross-reference between the requirements as stated in the Request for Proposal, and the corresponding responses provided by this submission.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.5.1: Required Metamodel</td>
<td>Specify a MOF metamodel to represent the concepts appropriate to a model of an enterprise organization structure.</td>
</tr>
<tr>
<td>6.5.2: Directory mapping</td>
<td>Specify at least one schema mapping for</td>
</tr>
<tr>
<td>Topic</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>Creation of a production directory for a modeled organization.</td>
<td></td>
</tr>
<tr>
<td>6.5.3: Express as UML</td>
<td>Express models using UML in its most recently adopted version.</td>
</tr>
<tr>
<td>6.5.4: Views</td>
<td>Ensure that appropriate views may be defined for reporting and for export of subsets of the model.</td>
</tr>
<tr>
<td>6.5.5: XMI</td>
<td>Specify XMI for the exchange of models between different tools.</td>
</tr>
<tr>
<td>6.5.6: Enterprise entities and relationships</td>
<td>Support models where types of entities, types of relationships and modeling constraints can be specified for an enterprise. Instances of entity and relationship types specify actual organization structures and people.</td>
</tr>
<tr>
<td>6.5.7: Specialized Entity Types</td>
<td>Support the ability to define types of organizational entities (e.g., division, department) and add custom attributes to organizational entities while preserving the ability to exchange the model between tools based on the standard meta model.</td>
</tr>
<tr>
<td>6.5.8: Unique Identities</td>
<td>Require organizational entities to be uniquely identifiable.</td>
</tr>
</tbody>
</table>
6.5.9: Level of Authority  
Provide representation that will express level of authority for various positions (e.g., spending authority, hiring authority, review authority).

6.5.10: Diverse Organizational Structures  
Provide the ability to define a variety of organizational structures including all traditional forms of organizational structure, for example, hierarchical organizations, and matrix organizations.

6.5.11: Extended Enterprise  
Provide for integrating organizations outside the principal enterprise with appropriate designation of which entities belong to which enterprises. This may arise, for example, with franchised operations, outside services or outsourcing.

6.5.12: Matrix Organizations  
Provide for the representation of organizational structures that span across the primary organizational structure such as committees and project teams and the associated responsibilities of participants in these organization structures.

6.5.13: Transitional States  
Provide for specification of resolution mechanisms for transitional states where positions in an organization may be temporarily vacant or the assigned person is unavailable.

6.5.14: Expression of Constraints  
Provide for the specification of constraints on the organization structure, entity.
attributes and relationships, for example, minimum or maximum number of direct reports, a person cannot be assigned to indirectly report to themselves, a person cannot be assigned to two positions that require separation of authority and a person may not have more authority than that person’s manager

6.5.15: Levels of Compliance

Define compliance levels that support compliance of organizational design/modeling tools that are separate from production directories providing runtime access to organizational structure information

0.7.2 Optional Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.6.1: Effective Dates</td>
<td></td>
</tr>
<tr>
<td>Support effective dates for all organizational structure and/or element changes.</td>
<td></td>
</tr>
<tr>
<td>6.6.2: Organization “as of” Specified Date</td>
<td></td>
</tr>
<tr>
<td>Support the ability to retrieve organizational information ‘as of’ a particular date.</td>
<td></td>
</tr>
<tr>
<td>6.6.3: Templates</td>
<td></td>
</tr>
<tr>
<td>Provide for the definition of templates (prototypical fragments of organizational structure) for designing organizations. Specifications shall define how existing instances created with a template will be dealt with when the template changes.</td>
<td></td>
</tr>
</tbody>
</table>
### 6.6.4: Alternative Vocabularies

Support multiple alternative vocabularies as provided by the Business Semantics of Business Rules, assuming that specification is adopted.

### 6.6.5: Position Qualifications

Provide for the specification of personnel qualifications for a position in the organization such as a certification or educational requirement.

### 0.7.3 Issues to be Discussed

<table>
<thead>
<tr>
<th>Issue to be discussed</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.7.1: Relationship to Directories</td>
<td>How an organization model relates to existing directories and directory technology, particularly those compliant with LDAP.</td>
</tr>
<tr>
<td>6.7.2: Alternative Organizational Types</td>
<td>Examples of the representation of alternative organizational types and viewpoints.</td>
</tr>
<tr>
<td>6.7.3: Runtime Access Authority</td>
<td>How the specification supports specification or derivation of an individual’s authority to access or modify views of the organizational model at runtime.</td>
</tr>
<tr>
<td>6.7.4: Integration with Related Models</td>
<td>Integration of the organizational structure</td>
</tr>
</tbody>
</table>
metamodel with business process models and resource management where such models may specify selection criteria for individuals based on organization, positions, and organizational relationships.
1 Introduction

This section provides introductory information for the Business Process Definition Metamodel specification. It has the following sub-sections:

- Objectives
- Scope
- Conformance
- Normative References
- Terms and Definitions
- Symbols and Abbreviations
- Changes to Adopted OMG Specifications
- Guide to this Specification
- Credits

1.1 Objectives

The design objectives of this specification are discussed in the following paragraphs.

1.1.1 Unified Organizational Representation

Provide the concepts behind the organization of diverse and mutually independent corporate and government entities, and thus enable a single metamodel to provide the basis for exchanging organizational models.

1.1.2 Support for Related Systems

Provide connection points into Business Process Descriptions, particularly with regard to the concepts of Role, Capability, and Responsibility. Likewise, provide connection points with Business Vocabularies and Business Rules.

1.1.3 Robust Models

Ensure that the specification will accommodate the full range of known diversity in modern organizations.
1.1.4 Model Integration

Support scenarios in which organizations merge, and consequently may desire the merging of models developed in accord with the proposed metamodel.

1.1.5 Multiple Vocabularies

Provide a metamodel with the ability to abstract from the concrete terminology used for organizational concepts, and to provide for the same concrete vocabulary to be assigned in particular instances, with differing semantics.

1.1.6 Business Rules

Consistency with leading conceptualizations of business rules is important, because organization is typically defined in terms of rules.

1.1.7 Business Process Concepts: Roles and Responsibilities

Consistency with leading conceptualizations of business process is important, because organization is typically defined in terms of roles and responsibilities, which are also central concepts in many views of business process.

1.2 Scope

The following paragraphs describe the scope of the OSM specification. The last subsection briefly describes several subject areas that are specifically out of scope and should be addressed by other, related specifications.

1.2.1 Organization Structure

The primary objective is to enable the robust representation of an organization’s structure including formal relationships that go beyond the traditional hierarchical structure.

1.2.2 Effective Dates

Effective dates enable the organization to be viewed from the perspective of different points in time. This allows a model to include future changes so they can be effected automatically at the appropriate point in time. Past effective organizations may supported for accountability.

1.2.3 Multiple Chains of Authority

Modern organizations are not confined to a strict hierarchy for chains of authority. Different chains of authority may be defined for different purposes. These chains of authority should support approvals in automated business processes.
1.2.4 Qualifications

Qualifications for positions in organizations are an important aspect of organizational design. Qualifications are the filters applied to capabilities to determine if candidates can be considered for a position.

1.2.5 Business rules

There are three categories of business rules relevant to an organization model: (1) rules governing the formal relationships such as the number of direct reports or the assignment of a person to multiple positions, (2) rules defining authority such as spending authority, and (3) rules defining responsibilities relative to a business process.

1.2.6 Business process roles and responsibilities

Concepts of role and responsibility, involved in describing business organizations are also encountered in the domain of business process modeling.

Vocabularies

In a multi-national organization, it is beneficial to be able to express an organization model and associated rules in multiple languages. Furthermore, even within the same language community, the same organizational concept is likely to be expressed in different terminology. One corporation’s “geographic region” may be another’s “district”.

1.2.7 Extended Enterprise

With contract employees, integration of supply chains and outsourcing of business functions, organizational relationships are no longer confined to corporate employees. It must be possible to represent the entities and relationships of the extended enterprise.

1.2.8 Out of scope

The following subject areas are out of scope and should be addressed by other specifications.

Capabilities. The OSM does not address the representation of capabilities of organizations or people. These should be the subject of other human resources or service offering services.

Services. The OSM does not provide for the specification of any services with respect to organization management.

Notation. Graphical and textual notations are outside the scope of this specification per se. Nevertheless, XMI (XML for Model Interchange) defines the standard for exchange of MOF-based models and will provide portability of OSM models.
1.3 Conformance

**Full conformance** with this specification requires implementation of the ability to express organizational rules and express organizational names and relationships in multiple vocabularies in compliance with the SBVR specification as specified in Section 4.

**Basic conformance** with this specification requires the ability to model organizations supporting the OSM concepts defined in Section 3 and to import and export XMI that is compliant with the OSM XMI schema specification.

1.4 Normative Sections

The following sections of this specification are normative:

- Section 2, Overview
- Section 3, the basic OSM metamodel
- Section 4, the business rules extensions
- The Glossary in the Appendix

Other sections provide supporting material.

1.5 Terms and Definitions

See the Glossary in the Appendix.

1.6 Symbols and Abbreviations

1.7 Changes to Adopted OMG Specifications

There are no changes required to existing OMG specifications.

1.8 Guide to this Specification

The following section provides an overview of the OSM concepts to establish a general understanding and a framework for the detailed specification. Section 3 is the primary specification; it describes the OSM metamodel in detail. Section 4 extends the basic OSM metamodel to support business rules and alternative vocabularies based on SBVR. The appendix includes a glossary and examples.

1.9 Credits
2 Overview

This section is intended to provide an understanding of the various aspects of the specification and how they fit together. It contains the following sub-sections:

- Organization unit
- Position
- Legal Entities
- Assignments
- Extended enterprise
- Contractor personnel

2.1 Organization Unit

The fundamental element of an organization structure is the organization unit. This represents any recognized association of people in the context of the enterprise. In a hierarchical structure, it may be the corporation, a division, a department, a group or a team. In addition, it may be a committee, a task force, a project management organization, a class (for education) and so on.

The representation of associations as organization units may vary. The primary factors are (1) is the association formally recognized, and (2) is the association sufficiently persistent to be the basis of planning, processes and business rules.

The top-level organization unit of a corporation is designated as “independent” to indicate that it represents the legal entity. There is only one such organizational unit associated with a company. At the same time, these legal entity business units may be members of a conglomerate, or local subsidiaries of a global corporation. Consequently, they may still have reporting relationships.

2.2 Relationships

Organization units are linked by relationships. These relationships generally reflect some form of authority. Traditionally, most authority relationships were based on the organizational hierarchy. Today, authority relationships are often specialized, creating different relationships for different authority subject matter. Authority may be based on budgets and spending, work product approval, resource allocation, or other factors.
2.3 Position

A position defines a role in an organization. This is a specialization of the general concept of role. A position may call for a certain number of people to be assigned. The actual number may vary from this ideal number.

An Organization unit may have a number of different positions. A position may be designated as orgLeader = True, indicating that this is the leader of the associated organization. It is expected that an organization unit would have only one position with one person designated as the leader. Of course, there could be multiple people assigned with mutually exclusive effective dates.

2.4 Legal Entities

Legal entities are people and corporations that participate in the enterprise. The corporation of the enterprise being modeled is a legal entity. People are the employees, contractors or business partner personnel who are members of the enterprise organization. From an organizational perspective, external corporations are significant when they have employees or agents that have roles in the enterprise organization.

Only people can occupy positions in the organization, because people make decisions, perform tasks, and are responsible for their actions. While corporations may conceptually make decisions or perform services, it is people who are ultimately responsible. Corporations are organizational units with related organizational units and positions with people assigned.

2.5 Assignments

People are linked to positions through assignments. A person may have multiple assignments, linking them to multiple positions. The assignments may have different effective dates that may or may not overlap.

A specialization of assignment links a contractor person to the position of the agent responsible for the contractor person in the contracting corporation context.

2.6 Extended Enterprise

In addition to contractor personnel relationships, an enterprise may be highly integrated with suppliers and outsourced business functions. Thus, an organizational unit may be a unit of an external corporation. The organization unit has an association with its parent company. If the parent company of one organization unit is different from the parent company of a related organization unit, then the relationship is inherently a business partner relationship.
2.7  Contractor Personnel

A contractor may be assigned to a position in the organization. The contractor is affiliated with a different corporation, and the contractor can have an agent who is responsible for the contractor person’s performance on the contract assignment and for the contractual relationship of the primary corporation with the contracting corporation. The agent person occupies a position in the contracting corporation.
3 Basic OSM Specification

This section defines the OMS metamodel in detail. The metamodel is presented in four parts:

- Core
- Legal entity
- Position
- OrgUnit

While these could all be presented as a single diagram, the separation facilitates explanation by providing focus on a subset of the metamodel. Some elements occur in multiple diagrams for the sake of clarity of relationships, but they are described only in the first diagram in which they appear.

3.1.1 Core

The core concepts are shown below. The types in yellow are abstract types (i.e., are not instantiated in a model).
**NamedElement**: this is a super-type for all elements that have names.

**OrgElement**: This is a super-type for all elements that have effective dates and a statement of purpose.

**OrgNode**: This is a super-type for elements that identify nodes in the organization structure.

**OrgUnit**: This represents an organizational unit in and organizational structure. Units may be comprised of other units as defined by OrgRelationships and/or people as defined by OrgPositions. An independent OrgUnit (independent = True) does not have a parent organization.

**Role**: This is a common super-type for elements that define roles. This provides a common root for roles in organizations as well as roles in processes. A role defines the
characteristics of an entity in a particular context. Here the general concept of role is specialized to a position within an organization.

**OrgPosition**: An OrgPosition defines the role of one or more people in an organization unit. It can specify an idealNumber as the intended number of people so that the number can be over or under target and still be represented. An OrgUnit may have multiple different OrgPositions that are concurrently effective. Generally, an OrgUnit will have an OrgPosition with idealNumber = 1 for a manager. People can occupy multiple OrgPositions, but generally the positions will be in different OrgUnits.

OrgAssignment: An OrgAssignment links a person to an OrgPosition. The assignment identifies the effective dates for that particular person. A person may be assigned to multiple positions with overlapping effective dates.

**OrgRelationship**: An OrgRelationship defines a relationship between OrgUnits. Relationships may be for different purposes. The normal hierarchical relationship is one type. A committee with sub-committees could have a different relationship. An oversight authority could be another type of relationship.

**RelationshipType**: This defines the types of relationships that occur within an organization. A default set should be defined and additional types can be defined by a user.

### 3.1.2 Legal Entity

The diagram below defines LegalEntity and related concepts. Role, NamedElement, OrgPosition, and OrgAssignment have been defined previously and are shown here to show relationships to LegalEntity.
**LegalEntity:** LegalEntity represents entities that have legal status to enter into contracts, own property, etc. This generally represents people, corporations or government agencies.

**Addressable:** Addressable is an abstract super-type for association of contact information with legal entities and organizations.

**ContactInfo:** This carries address, phone number, etc., of a person, company or organization unit that enable that entity to be contacted.

**Company:** Company is the legal entity that is associated with an organization. Generally, the company will be associated with the top level of an organizational hierarchy. It is possible that subsidiaries could be companies (i.e., legal entities) so these companies might be associated with subsidiary organizational units. In addition, a primary organization may have relationships with contracting companies as described in the section on position.

**Person:** Person represents a human associated with the organization. Persons are only associated through assignments to positions. Persons can have only have relationships with other persons as members of a community or through positions and organization units.
**JobClassification**: This specifies a job classifications for people in an organization. A number of people can have the same job classification and be in different positions and organization units.

**Community**: A community is a group of people with a common interest. These may be communities within the organization or outside the organization (as in professional associations).

### 3.1.3 Position

This section expands on the concepts related to OrgPosition as depicted in the diagram, below. OrgAssignment and OrgPosition have been discussed earlier.

**ParticipationType**: This characterizes the nature of participation of the position in the organization. This would be used to designate a manager, a primary management relationship (e.g., payroll and performance), a matrixed relationship or possibly other forms of participation.
**PosAuthority**: This designates an authority associated with the position. This could indicate spending limit, hiring and firing authority, specific transaction types, etc. Not clear how much should be included in OSM.

**PosRequirements**: Specifies requirements for a person to occupy the position. This would be applied to the person’s capabilities (defined outside OSM) to determine if the person is qualified.

**ContAssignment**: This specialization of assignment provides for a position to be occupied by a contract person. It adds a relationship to a contracting agent.

**ContAgent**: This specialization of position associates a contractor agent with the assignment of a contractor person. The agent position is in the contractor company while the contractor assignment is in the primary company.

### 3.1.4 OrgUnit

This section expands on the concepts and relationships associated with the OrgUnit as depicted in the diagram, below. NamedElement, Addressable and OrgUnit have been described earlier.

**Company**: Company has also been discussed earlier, but the relationships to OrgUnit require further discussion. The “external” attribute indicates if this is the primary company being modeled or is an external company with which the primary company has a relationship. The “companyUnit” relationship indicates the head organizational unit of the company organization. The “company” relationship identifies the company as the legal entity for each OrgUnit in the structure, i.e., the legal entity for which the OrgUnit functions.

**BusinessFunction**: This defines a business function, a capability and responsibility of a business unit. A business function may be performed by multiple business units as where an enterprise may have multiple manufacturing plants or regional sales organizations. A single business unit may have multiple business functions.
4 Business Vocabulary and Rules Extension

The business rules extension provides (1) for the specification of business rules governing the design of an organization, and (2) for the specification of alternative vocabularies for expression of the organization structure and associated rules.

These capabilities are described for business rules in general in the Semantics of Business Vocabulary and Rules specification adopted by OMG. The OSM concepts become concepts incorporated into rules, that can be expressed in alternative vocabularies.

4.1 Metamodel Extensions

4.2 OSM English Vocabulary

This section defines a core English vocabulary for organization models. This vocabulary will be extended by specific organizations to express types of organizations, relationships and positions.

This section uses the styling of SBVR Structured English. This section also uses some vocabulary from that specification as noted below.

Figure 4.1, Relationships of Terms

The terms are defined, below.

**organization**
Definition: group of people or organizations joined together for a purpose

**organizational unit**
Definition: organization that is a part of another organization
General Concept: organization

```
organization
Definition: group of people or organizations joined together for a purpose

organizational unit
Definition: organization that is a part of another organization
General Concept: organization
```
**organization contains organizational unit**

Synonymous Form: organizational unit is within organization

**participant**

Definition: person or organization that takes part in something, such as in an organization

General Concept: person or organization

Concept Type: role

**organizational role**

Definition: role of a participant within an organization

General Concept: role

Necessity: If a participant fills an organizational role in an organization, then the participant is an instance of the organizational role.

**participant fills organizational role in organization**

Synonymous Form: organization has participant in organizational role

**person**

Definition: human being

**position**

Definition: organizational role of participation in a particular organization that is filled or is intended to be filled by an individual participant

General Concept: organizational role

Necessity: Each position is in exactly one organization.

Necessity: Each position is filled by at most one participant.

Necessity: A participant fills a position in an organization if and only if the participant fills the position and the position is in the organization.

**participant fills position**

**position is filled**

Definition: a participant fills the position

**position is open**

Definition: the position is not filled

**position is in organization**

Synonymous Form: organization has position

**organization type**

Definition: category of organizations based on characteristics that distinguish it from other kinds of organizations

General Concept: noun concept

Necessity: Each organization type specializes the concept organization.

**organization type uses organizational role**

Definition: the organizational role is applicable in organizations of the organization type

Note: Given a term ‘O’ designating an organization type and a term ‘R’ designating an organizational role used by that organization type, there is implicitly a binary fact type
having the form ‘O has R’, which relates an organization to a participant filling that role in the organization. E.g. for an organizational role ‘CEO’ used by the organization type ‘Corporation’, there is a fact type ‘corporation has CEO’.

The following terms are used in the definitions and rules above or in the examples below, but are not part of the Organizational Structure Vocabulary. They are from SBVR Meaning and Representation Vocabulary.

- concept
- noun concept
- role
- instance
- concept has instance
- concept specializes concept

4.3 Example Use of Vocabulary and Rules

This section provides an example to illustrate the use of SBVR vocabulary and Rules.

4.3.1 Example vocabulary

The following terms illustrates extension of the base vocabulary to describe additional organizational concepts and associated rules that might be applied to multiple organizations.

- corporation
  - General Concept: organization
  - Concept Type: organization type
- department
  - General Concept: organizational unit
  - Concept Type: organization type
- corporate officer
  - General Concept: person, participant
  - Concept Type: organizational role
- CEO
  - General Concept: corporate officer
  - Concept Type: organizational role
- manager
  - General Concept: participant
  - Concept Type: organizational role
- sales person
  - General Concept: person, participant
  - Concept Type: organizational role
management position
Definition: position that specializes the organizational role ‘manager’
General Concept: position

sales position
Definition: position that specializes the organizational role ‘sales person’
General Concept: position

management position supervises position
Synonymous Form: position reports to manager position

4.3.2 Example rules
The following statements use the vocabularies above.

Each corporation must have at least two corporate officers.

Each corporation has at most one CEO.

The organizational role ‘CEO’ is used by the organization type ‘corporation’.

Each department must have exactly one management position.

The management position of a department supervises each sales position of the department.

4.3.3 Example Model of Organizations and Positions
The following example applies the above vocabulary and rules to a specific organization.

E Corp
General Concept: corporation

E Corp Sales Department
General Concept: department

Bill
General Concept: person

Wesley
General Concept: person

Rita
General Concept: person

Sally
General Concept: person

The following statements use the vocabularies above.

E Corp has exactly one CEO.

Bill is the CEO of E Corp.
The ECrop Sales Department is within ECrop.

The ECrop Sales Department has exactly one management position.

Wesley is the manager of the ECrop Sales Department.

The ECrop Sales Department has exactly three sales positions.

Rita fills a sales position of the ECrop Sales Department.

Sally is a sales person of the ECrop Sales Department.

One sales position of the ECrop Sales Department is open.

The management position of the ECrop Sales Department supervises each sales position of the ECrop Sales Department.
Annexes

A. Glossary

B. Examples