**Rules**

**Toplevel**::= Full Scenario Rule

| Simple Scenario Rule

| Regulative Rule

| Constitutive Rule and Hornlike Rule

| Type Declaration

| Variable Definition

**Full Scenario Rule**::= [Toplevel...]

\\(except Scenario Rules)

**Simple Scenario Rule**::=

SCENARIO RuleName \\(except Scenario Rules)

GIVEN RelationalPredicate

[ ... ]

EXPECT RelationalPredicate [ ... ]

**Regulative Rule**::=

EVERY | PARTY Entity Label

[Subject Constraint]

[Attribute Constraint]

[Conditional Constraint]

[Upon Trigger]

Deontic Action Temporal | Deontic Temporal Action

[WHERE Constitutive Rule

[...]

|  |  |  |
| --- | --- | --- |
| **Obligation Case** | Permission Case | Prohibition Case |
| PARTY MUST… | PARTY MAY… | PARTY SHANT… |
| WITHIN deadline | | |
| IF FULFILLED | IF EXERCISED | IF PROHIBITION VIOLATED |
| IF VIOLATED | IF NOT EXERCISED | IF PROHIBITION NOT VIOLATED |

**Constitutive Rule**::= [GIVEN MultiTerm]

**Hornlike Rule** ::=

[Upon Trigger]

DECIDE Relational Predicate [AKA Alias]

| IS BoolStructR

| MEANS BoolStructR

| HAS Relational Predicate

| INCLUDES Set Group

WHEN RelationalPredicate BoolStruct

**Compact Constitutives**::=

[GIVEN MultiTerm]

[Upon Trigger ]

DECIDE Relational Predicate

WHEN Relational Predicate

[...]

|Relational Predicate OTHERWISE | GENERALLY

**Labels & Names**

**Entity Label** ::= Aliasable Name

**Aliasable Name**::= MultiTerm [AKA MultiTerm]

**Constraints & ‘Upon Trigger’**

**Subject Constraint** ::=

WHO RelationalPredicate BoolStruct

\\evaluated against the subject of the rule

**Attribute Constraint** ::=

WHOSE RelationalPredicate BoolStruct

**Conditional Constraint**::=

(WHEN | IF) RelationalPredicate BoolStruct [UNLESS RelationalPredicate BoolStruct]

**Upon Trigger** ::=

UPON Aliasable Name

**Deontics**

**Deontic Temporal Action**::=

Deontic Keyword Temporal Constraint

-> | DO Action Expression

**Deontic Keyword** ::=(MUST | MAY | SHANT)

**Deontic Action Temporal** ::=

Deontic Keyword Action Expression

Temporal Constraint

**Temporal Constraint**::=

(BEFORE | AFTER | BY | UNTIL) Temporal Spec

**Dictionaries & Key/Value expressions**

**Action Expression**::= Dictionary

**Example**: pay vendor

amount| $20

by |cheque

**Dictionary** ::= Detail Key/Value

[ ... ]

**Detail Key/Value** ::=

Single Term [MultiTerm]

[newline indented [Dictionary] ]

**Detail Key** ::= Single Term

**Single Term and MultiTerm**

**Single Term**::=

a string or number within a single cell

**MultiTerm** ::=

Single Term [Single Term...]

**Type Definition & Variable Definition**

**Type Declaration** ::=

DECLARE MultiTerm [Type Signature]

HAS MultiTerm [Type Signature]

[... ]

**Example**: DECLARE Point

HAS position x IS A Number

position y IS A Number

**Variable Definition** ::=

DEFINE Value Term [Type Signature] //class-object instantiation

HAS MultiTerm [Type Signature]

[ ... ]

**Booleans & BoolStructs**

**Boolish** ::=

(TRUE | FALSE | Yes | No)

**BoolStruct Expression**::= Expression

"BSE" | BSE AND BSE

| BSE OR BSE

| NOT BSE

| (Expression)

**BoolStructR** ::=

BoolStruct Relational Predicate

**Relational Predicate**

**Value Term and Set Group**