

OOA of MASL

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OOA of MASL

outline

- goals
- strategy
- OOA of MASL
- MASL loader
- next steps

goals

- capture MASL as a model
- parse and load correct MASL
- anticipate cloud architecture



strategy

- port MASL model compiler java model
 - leverage working starting point
 - low-risk with large number of artifacts
 - script conversion of java to MASL
 - import into BridgePoint
- adjust ported model
- refine with action language

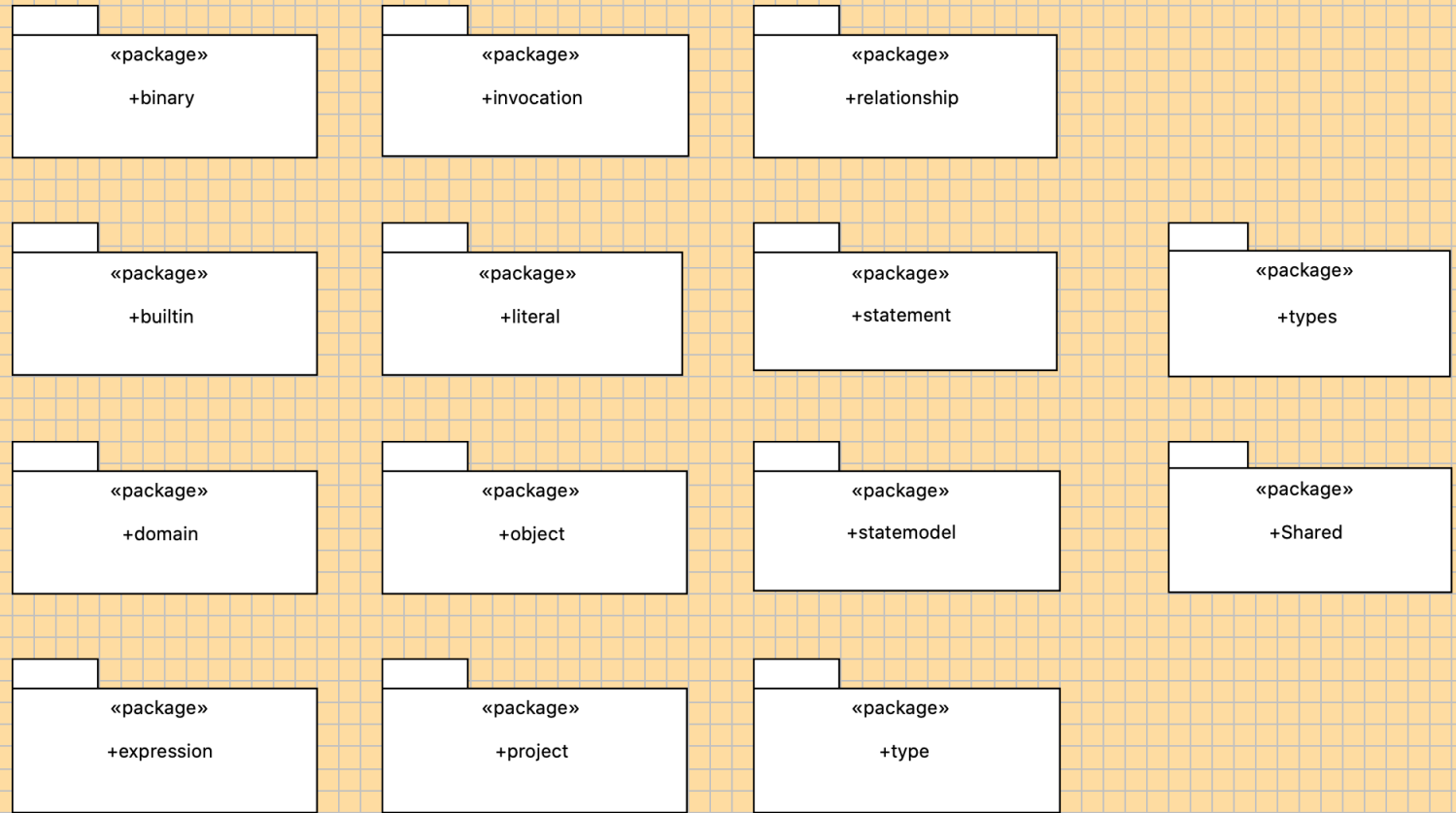


OOA of MASL

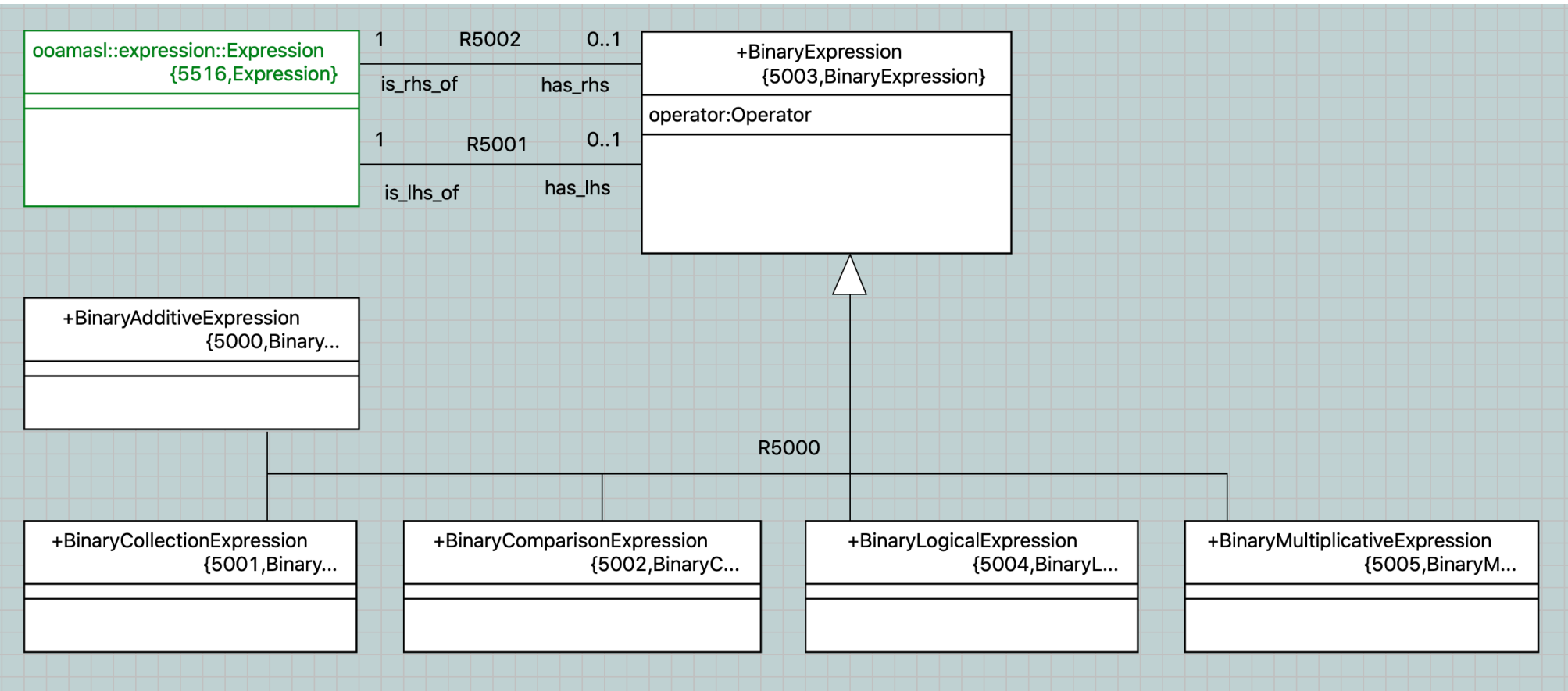
- ooamasl subsystem packages
- package references and *naked* OOA
- statistics
- deployment component (ME and canvas)
- tour of each subsystem

OOA of MASL: ooamasl packages

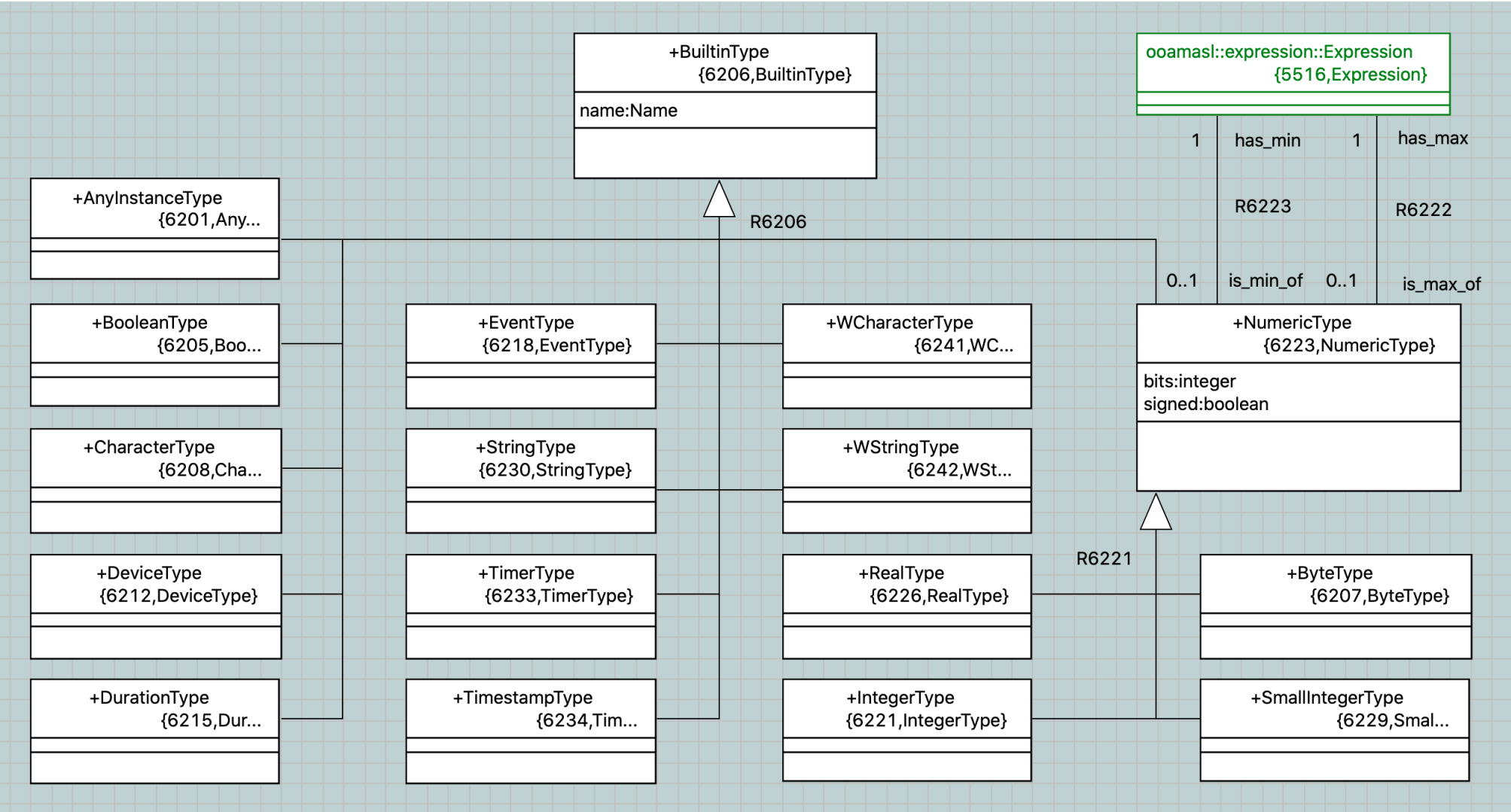
- ▼ ooamasl [mc 11745_loadmasl3]
 - ▶ binary
 - ▶ builtin
 - ▶ domain
 - ▶ expression
 - ▶ invocation
 - ▶ literal
 - ▶ object
 - ▶ project
 - ▶ relationship
 - ▶ Shared
 - ▶ statement
 - ▶ statemodel
 - ▶ type
 - ▶ types
- ▶ runtime [ciera master]
- ▶ > stratus [mc 11745_loadmasl3]



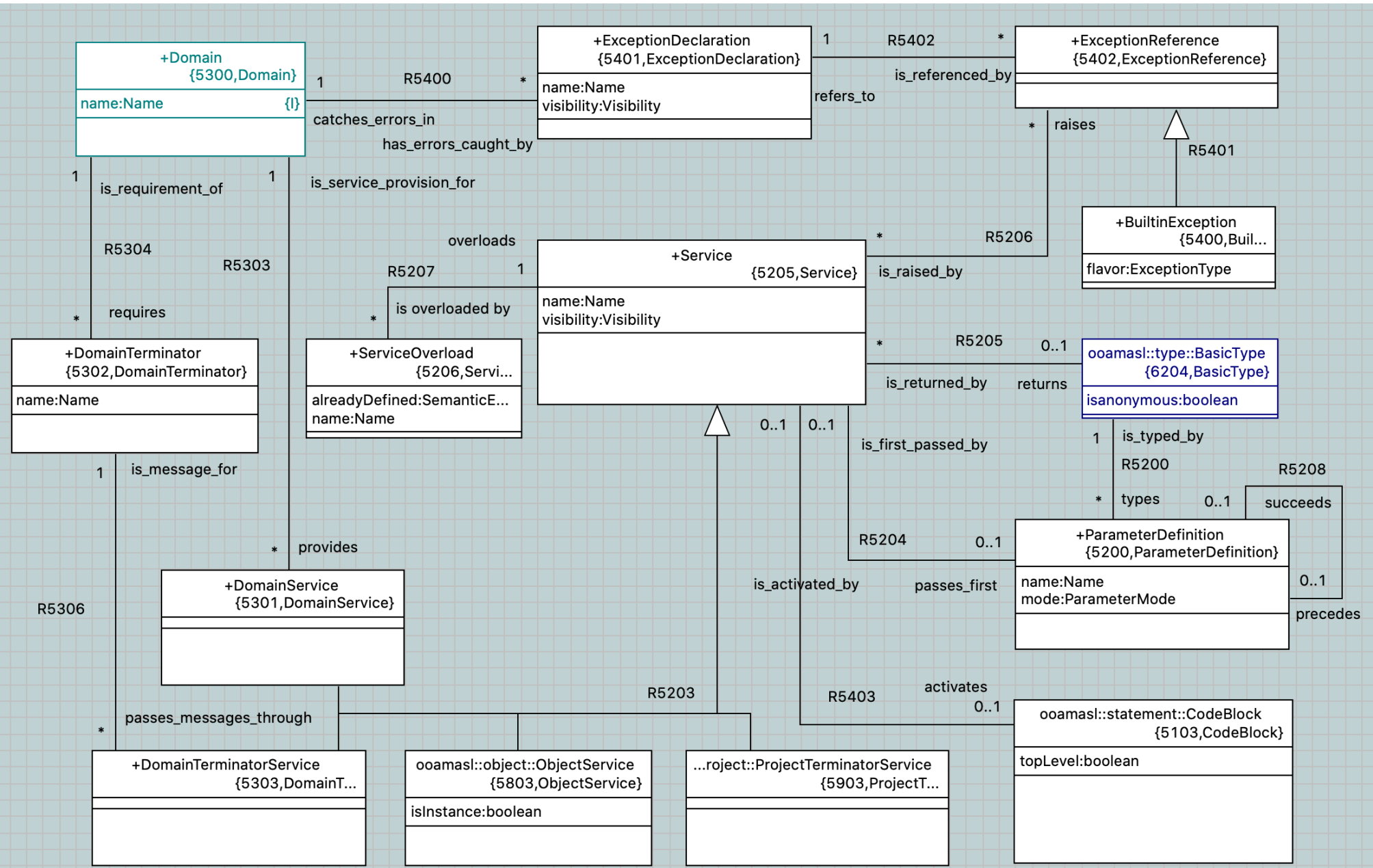
OOA of MASL: binary



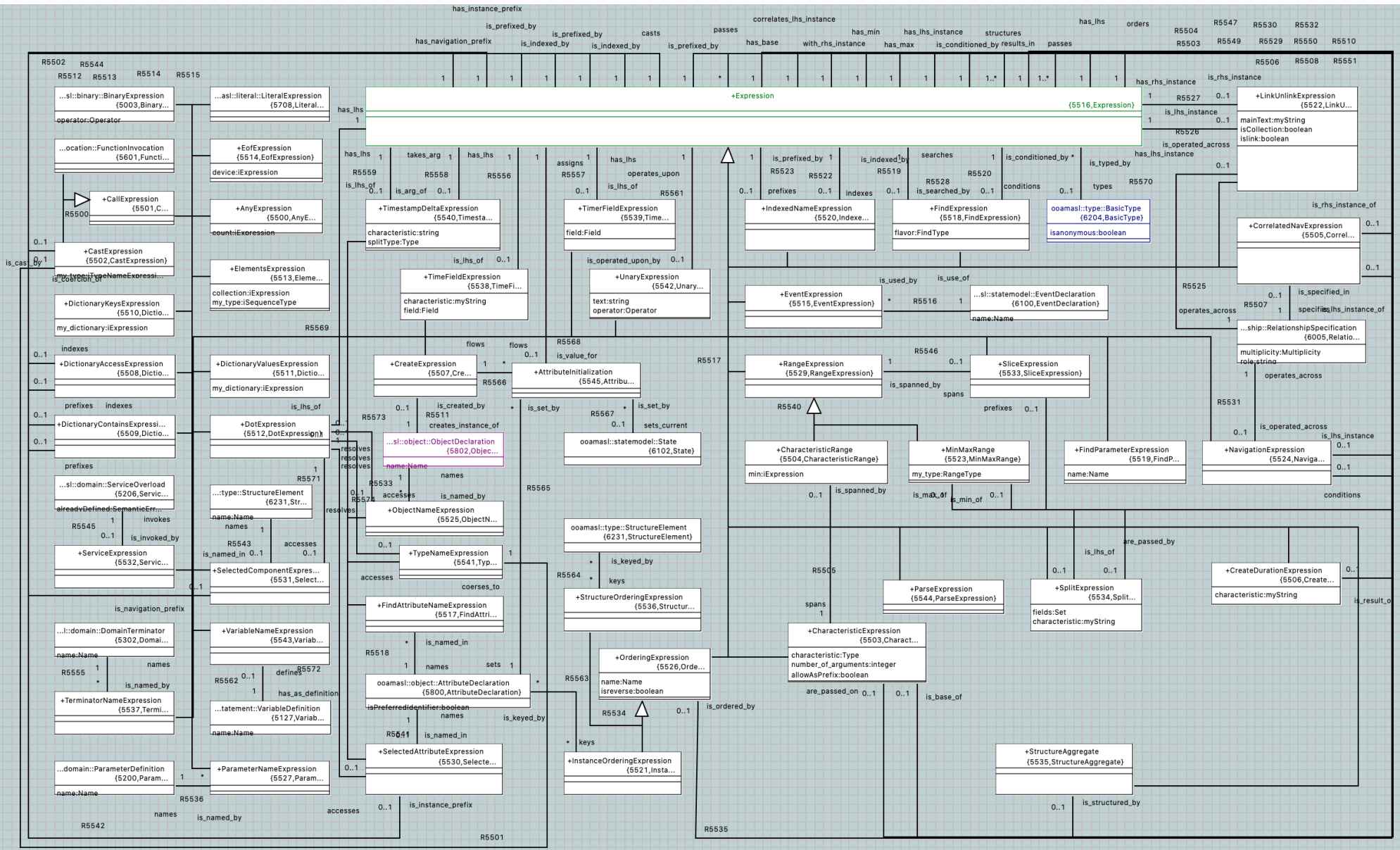
OOA of MASL: builtin



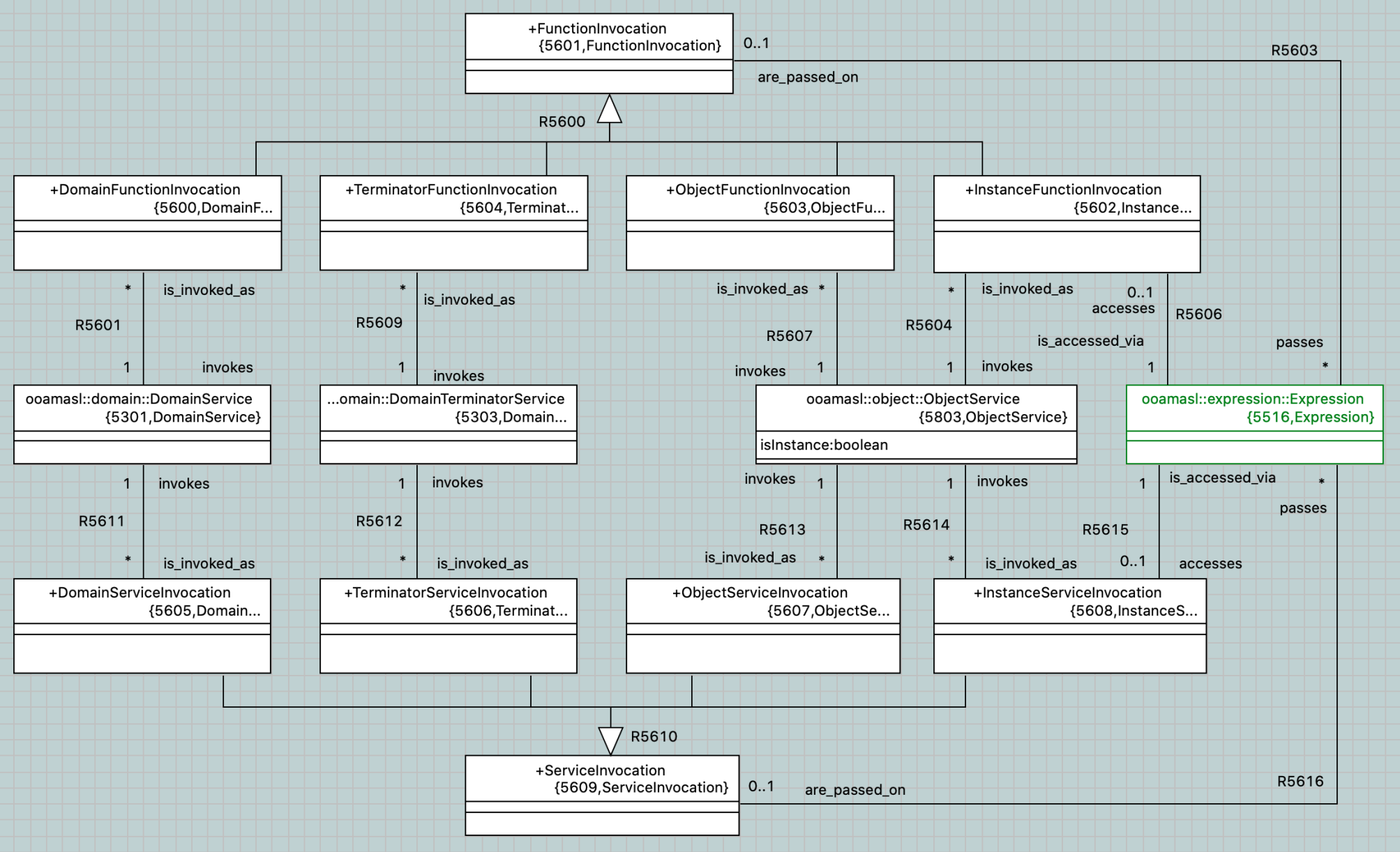
OOA of MASL: domain



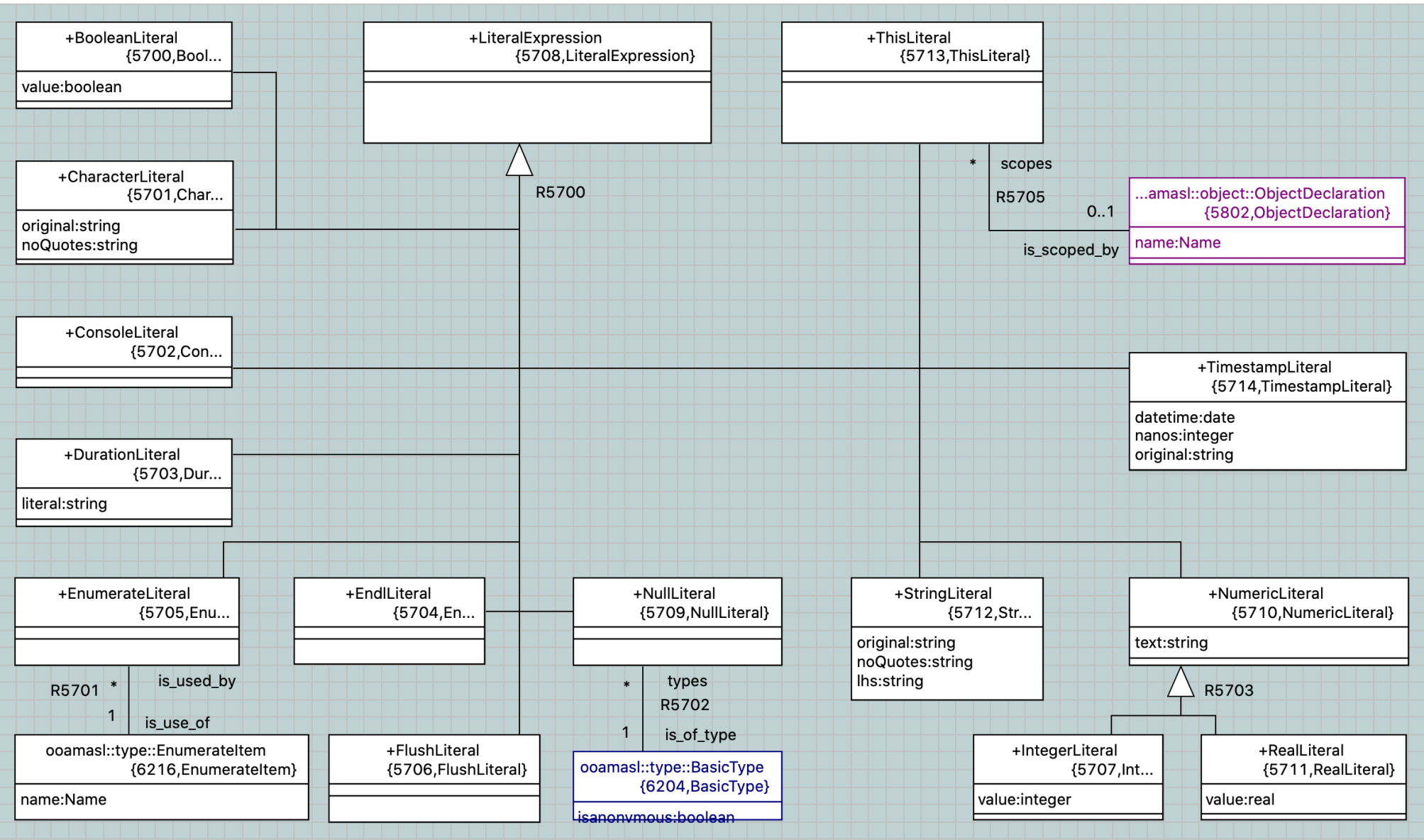
OOA of MASL: expression



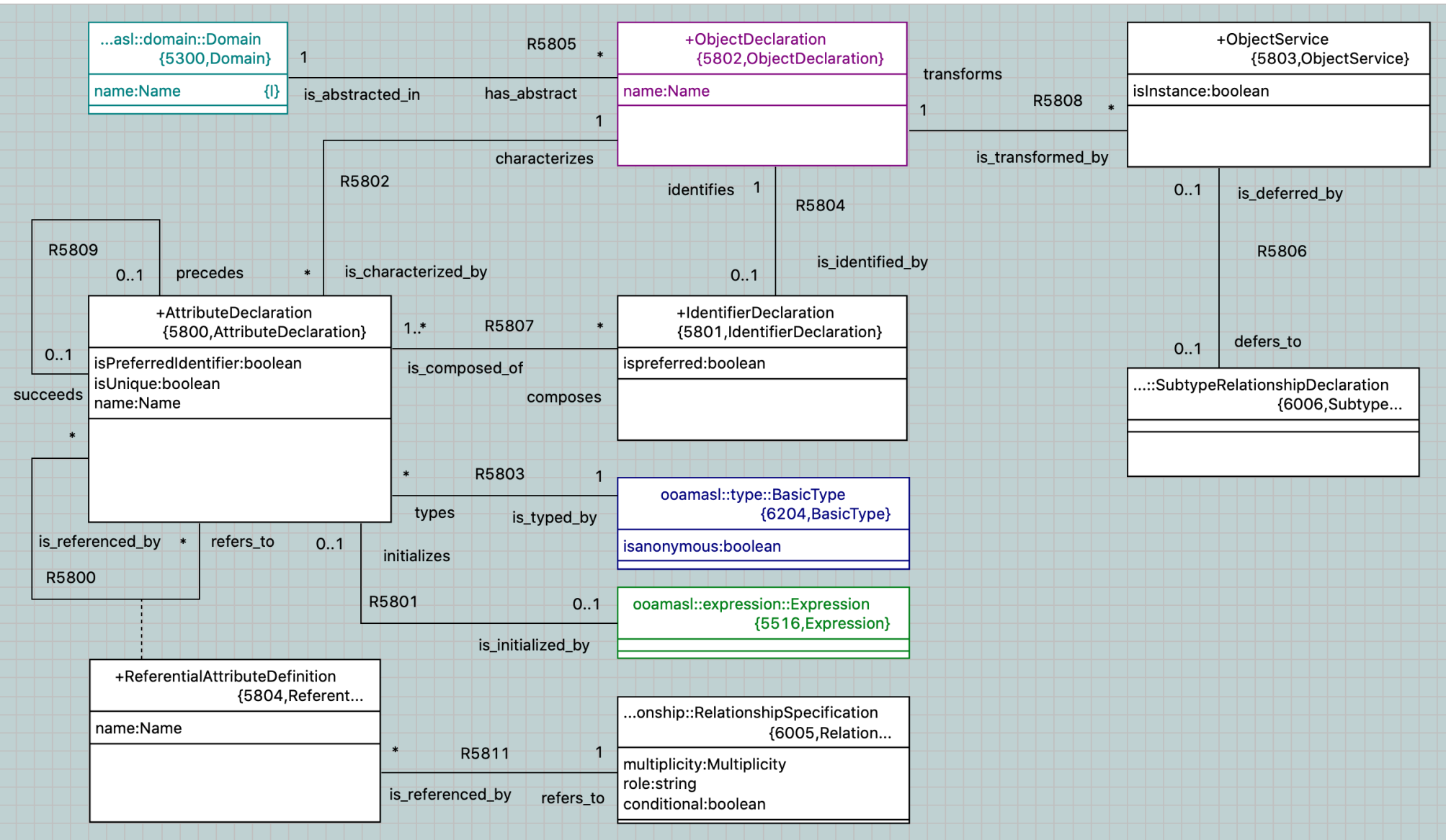
OOA of MASL: invocation



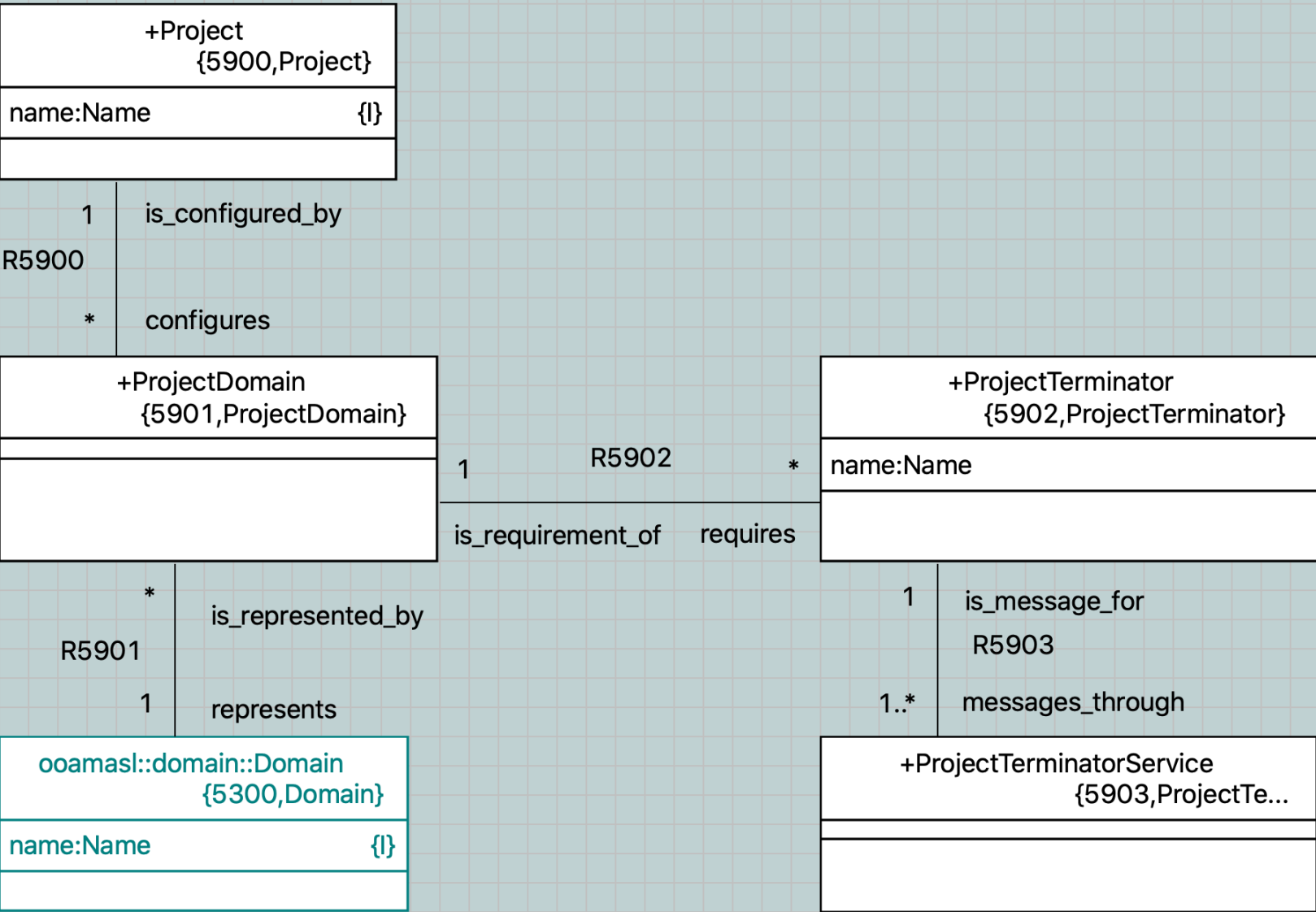
OOA of MASL: literal



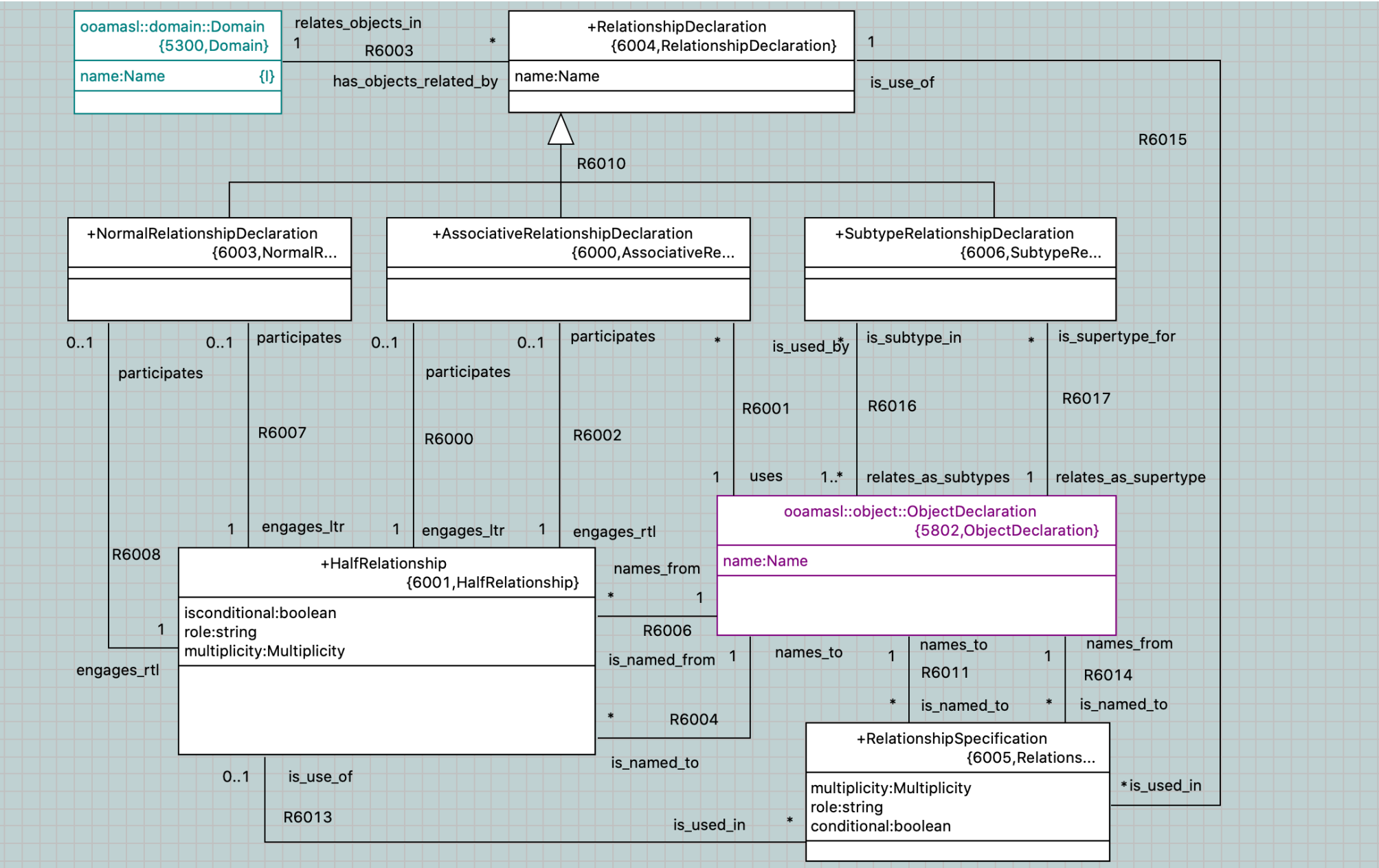
OOA of MASL: object



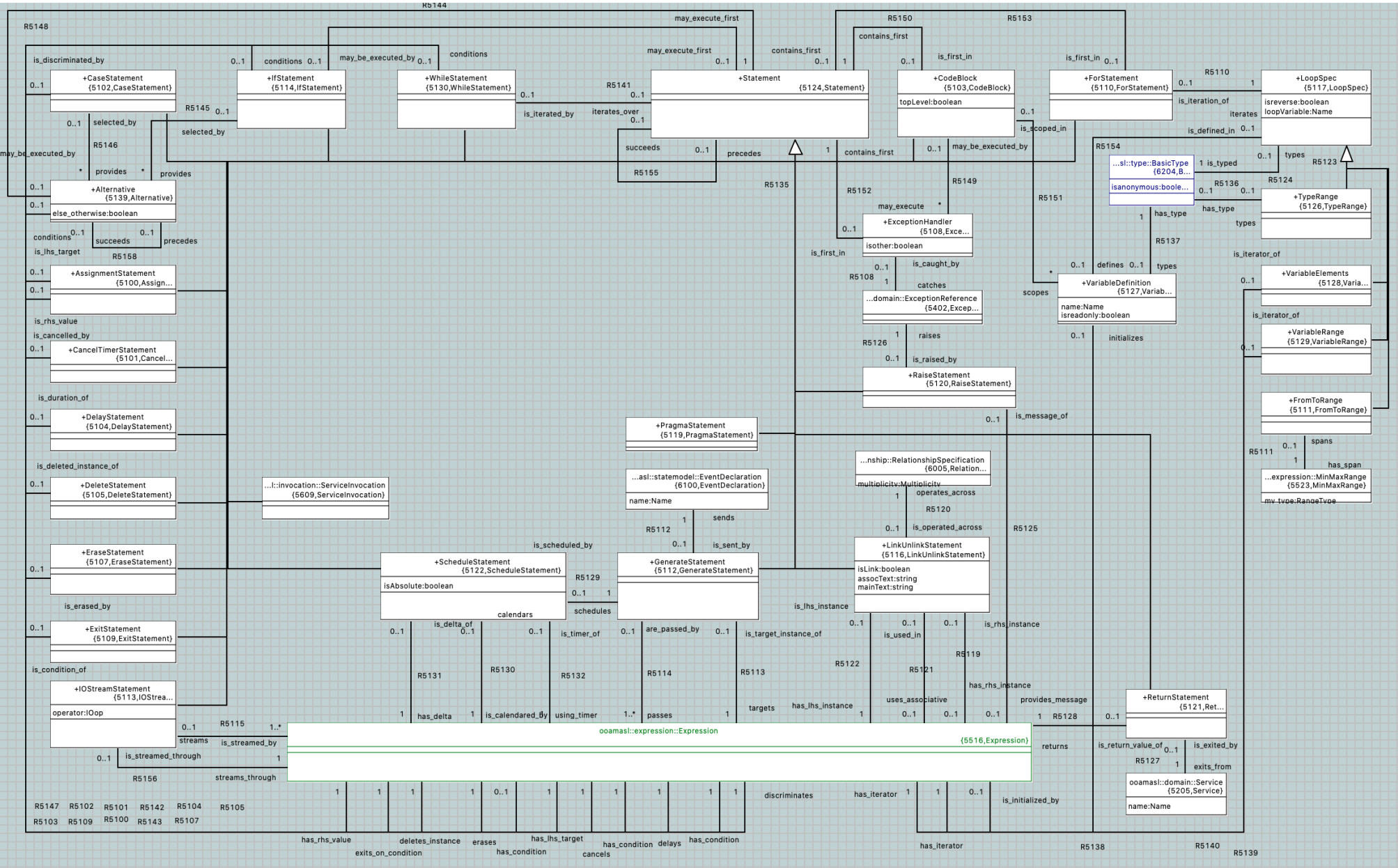
OOA of MASL: project



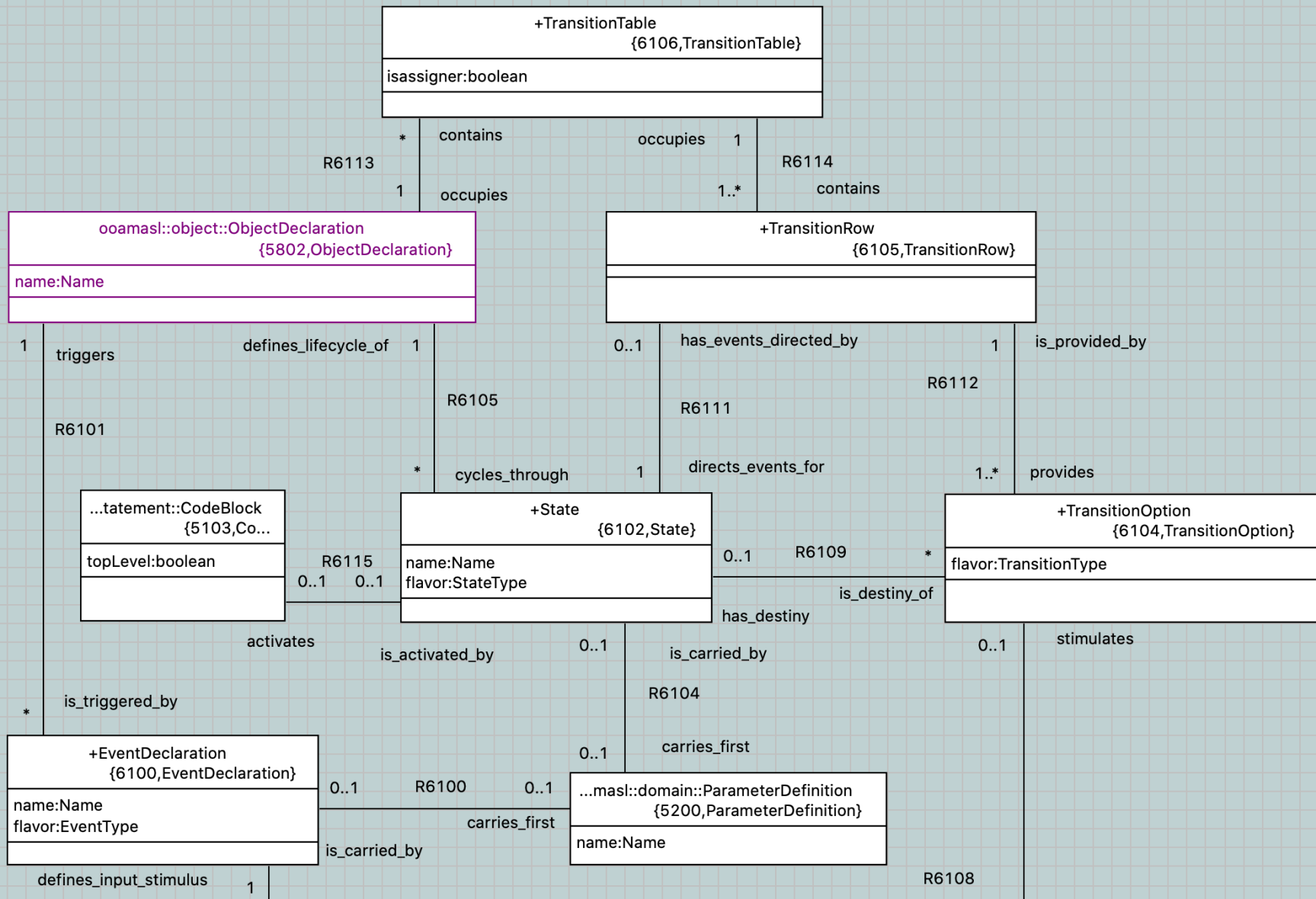
OOA of MASL: relationship



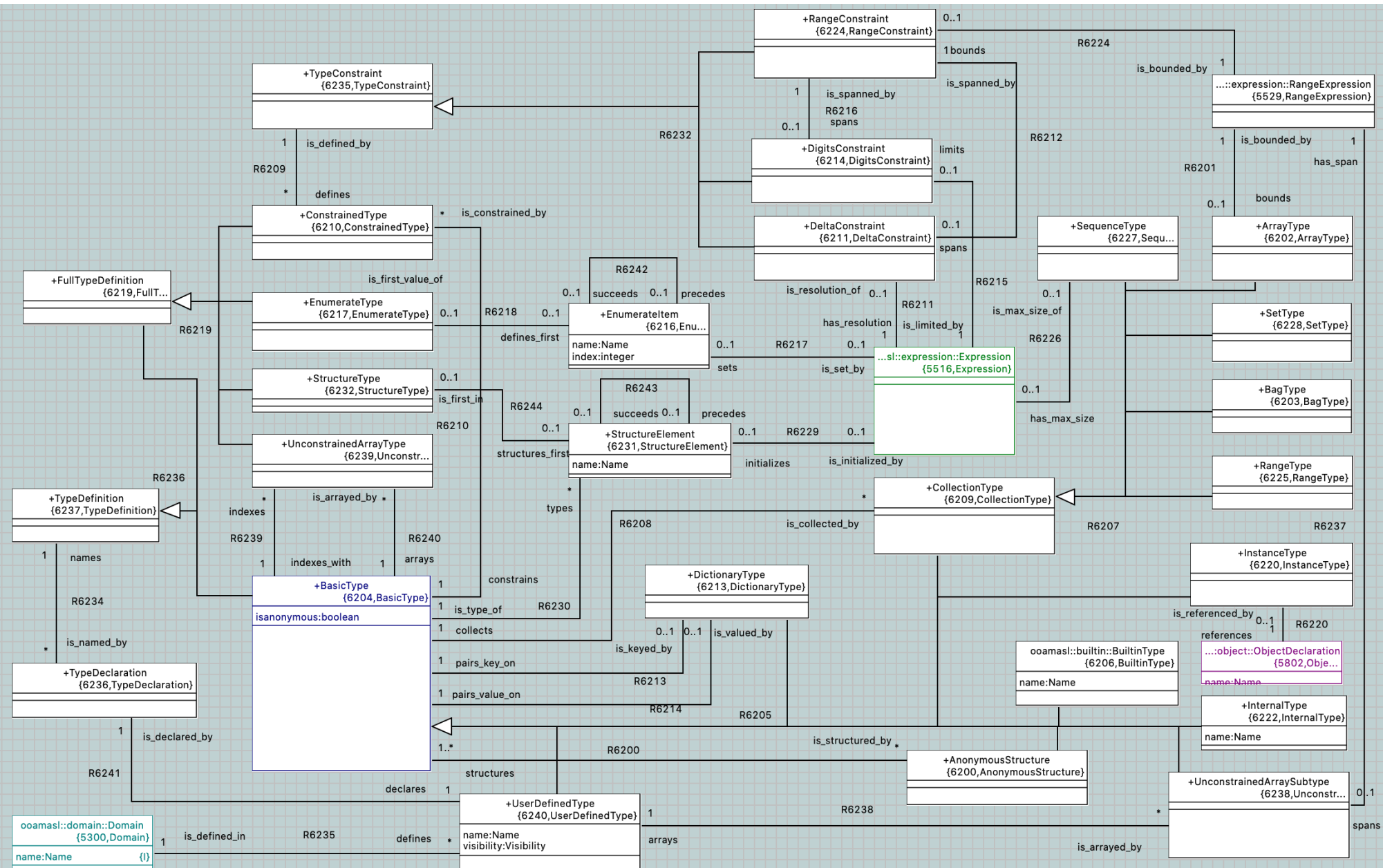
OOA of MASL: statement



OOA of MASL: statemodel

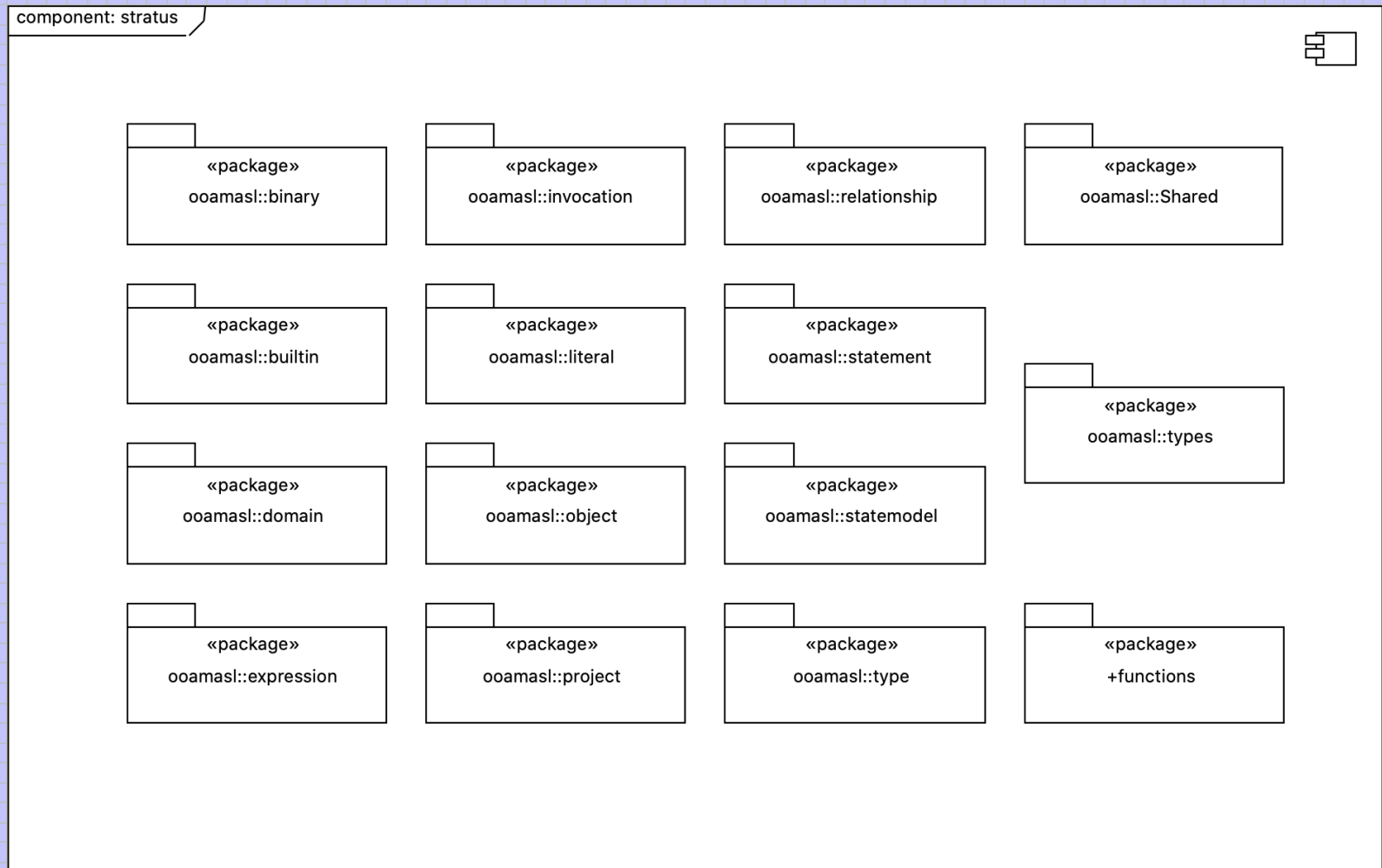


OOA of MASL: type



OOA of MASL: Stratus Deployment

```
▶ ooamasl [mc 11745_loadmasl3]
▶ runtime [ciera master]
▼ > stratus [mc 11745_loadmasl3]
  ▼ deploy
    ▼ +stratus
      ooamasl::binary
      ooamasl::builtin
      ooamasl::domain
      ooamasl::expression
      ▼ functions
        builtin_types
        ▶ create_RelationshipSpe
        init
        render_HelloWorld
        render_metamodel
        ▶ resolve_name
        ▶ select_any_AttributeDe
        ▶ select_any_BasicType_v
        ▶ select_any_DomainServ
        ▶ select_any_DomainTerm
        ▶ select_any_EventDeclar
        ▶ select_any_ExceptionDe
        ▶ select_any_ObjectDeclar
        ▶ select_any_ObjectServi
        ▶ select_any_ProjectTerm
        ▶ select_any_Relationship
        ▶ select_any_State_relate
        ▶ select_any_State_where
        ▶ select_any_TypeDeclar
        ▶ select_any_UserDefined
        ▶ select_any_VariableDefi
      ooamasl::invocation
      ooamasl::literal
      ooamasl::object
      ooamasl::project
      ooamasl::relationship
      ooamasl::Shared
```



package references and *naked* OOA of MASL

- A package reference is a package linked to another package in another location (package or project).
 - Package references allow reuse and *import* of subsystems.
- The term *naked OOA* refers to a class model with no state or functional activity intended to be used as the schema for multiple projects.
 - A meta-model is most useful as a naked class model.

Statistics

Statistics

subsystems	12
classes	176
attributes	117
relationships	230
production rules	166
generated LOC (;)	51292

MASL loader

- deployment model
 - imported OOA of MASL subsystem packages
 - loader helper functions (OAL)
- parser as antlr lexer / parser
- loader as antlr walker with invocations into deployment model
- model API functions
 - Ciera provides an API which allows create, relate, set_attribute and call_function

MASL loader

- action language functions
- LOAD class interface to generated model Java
- Ciera provides a build chain based upon maven.
- Ciera generated code
- calculator ALU has been primary test model.
- Stratus can parse and load Stratus.
- Generate Hello, world.
- Generate abstract classes with stratus of stratus.
- Generate inventory report of major elements sorted in some order.

MASL loader: key functions

- init
- Builtin/InternalType_populate
- select_any_ObjectDeclaration_where_name
- resolve_name
- create_RelationshipSpecification
- ReferentialAttribute_resolve

next steps

- review, further test and refinement
- template and rendering HOWTO
- cloud template integration
- Java translation of MASL activities