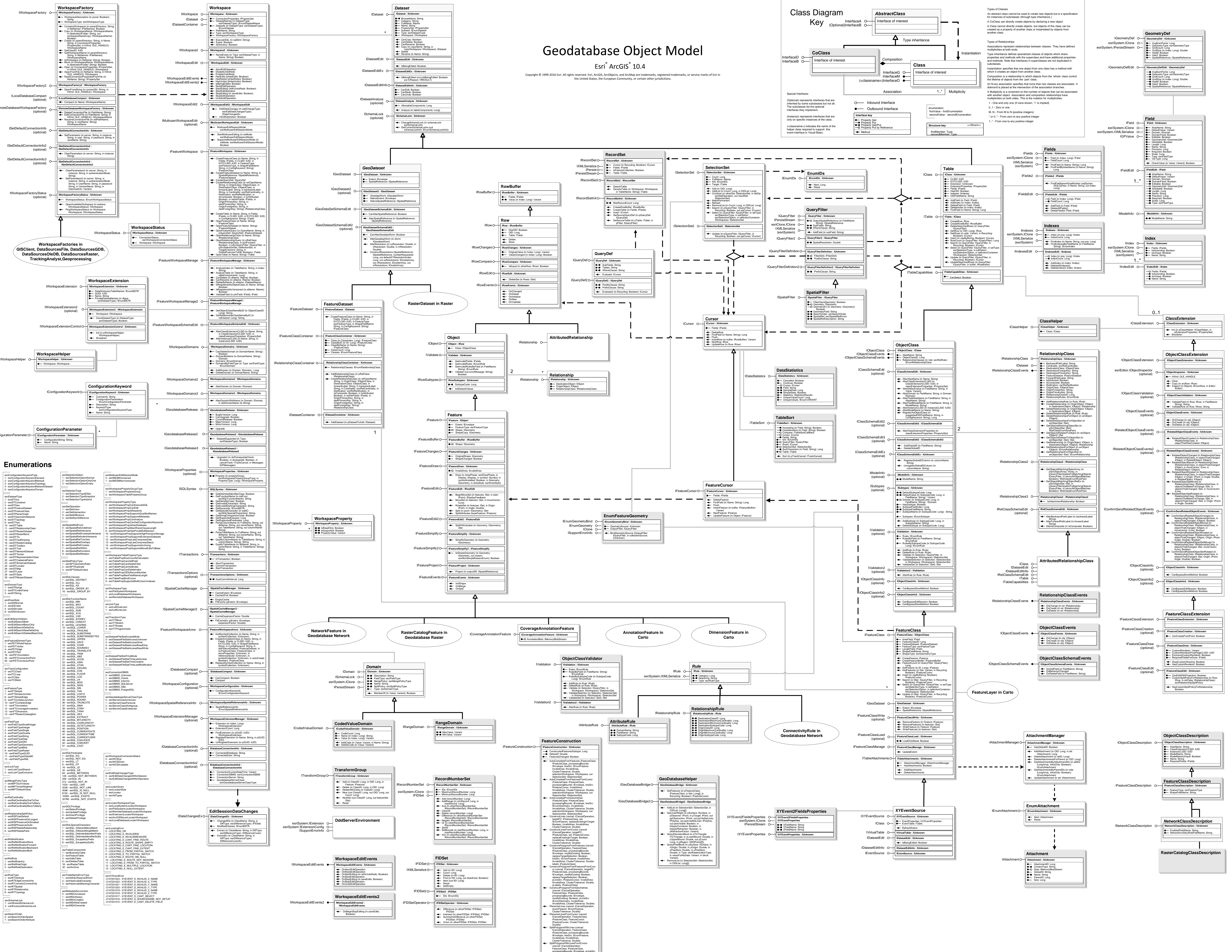


# Geodatabase Object Model

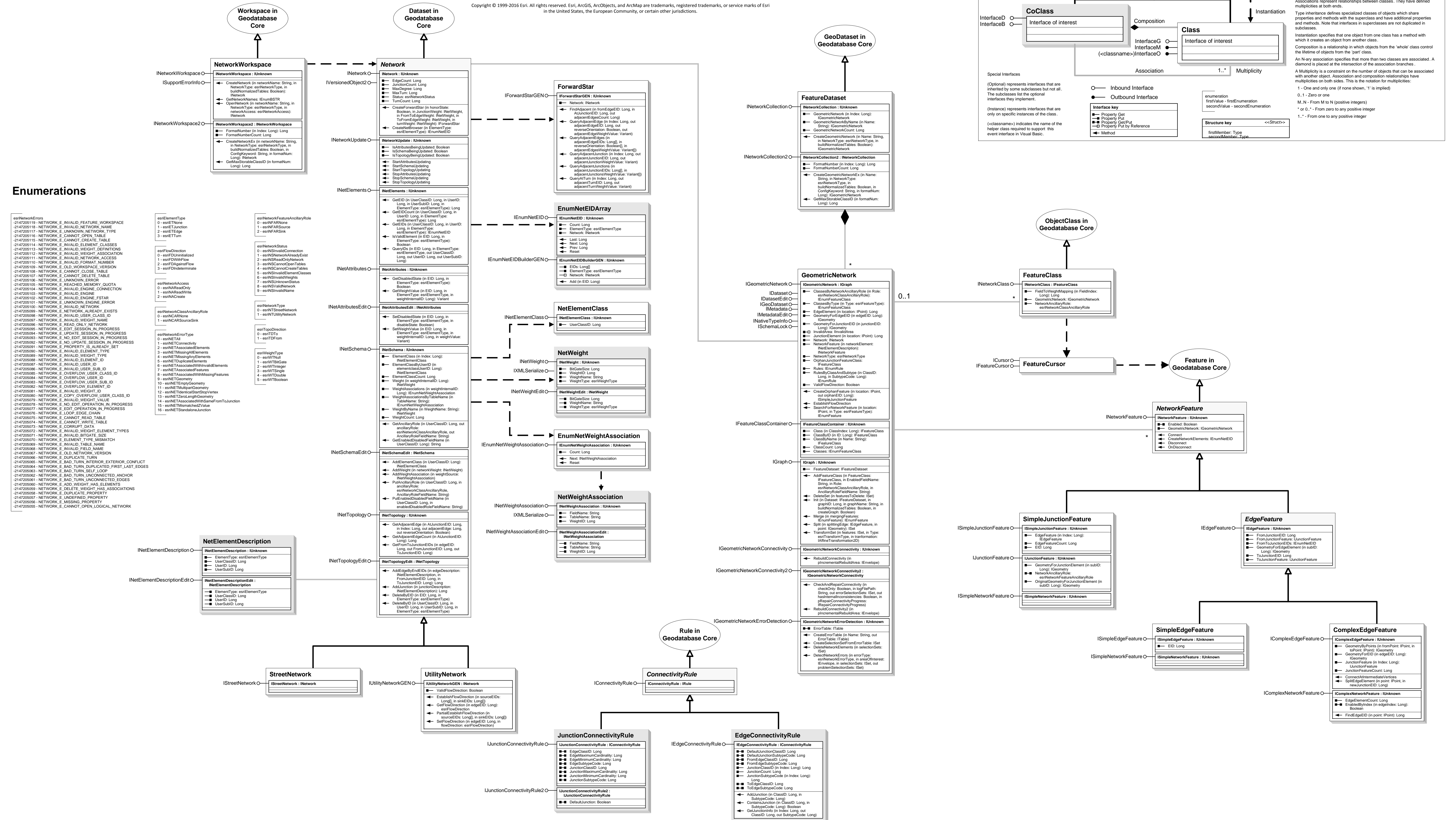
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# Geodatabase Object Model Geometric Network

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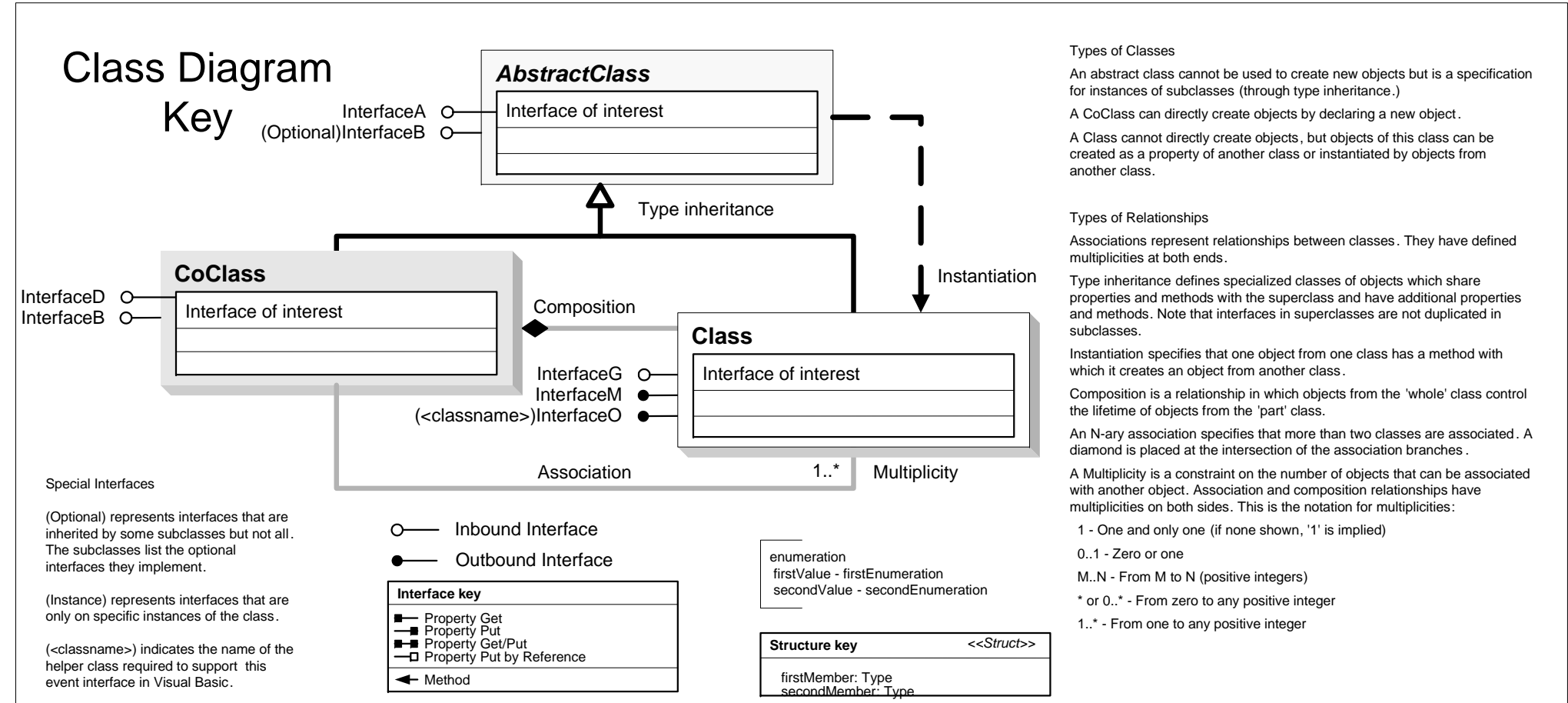


# Geodatabase Object Model

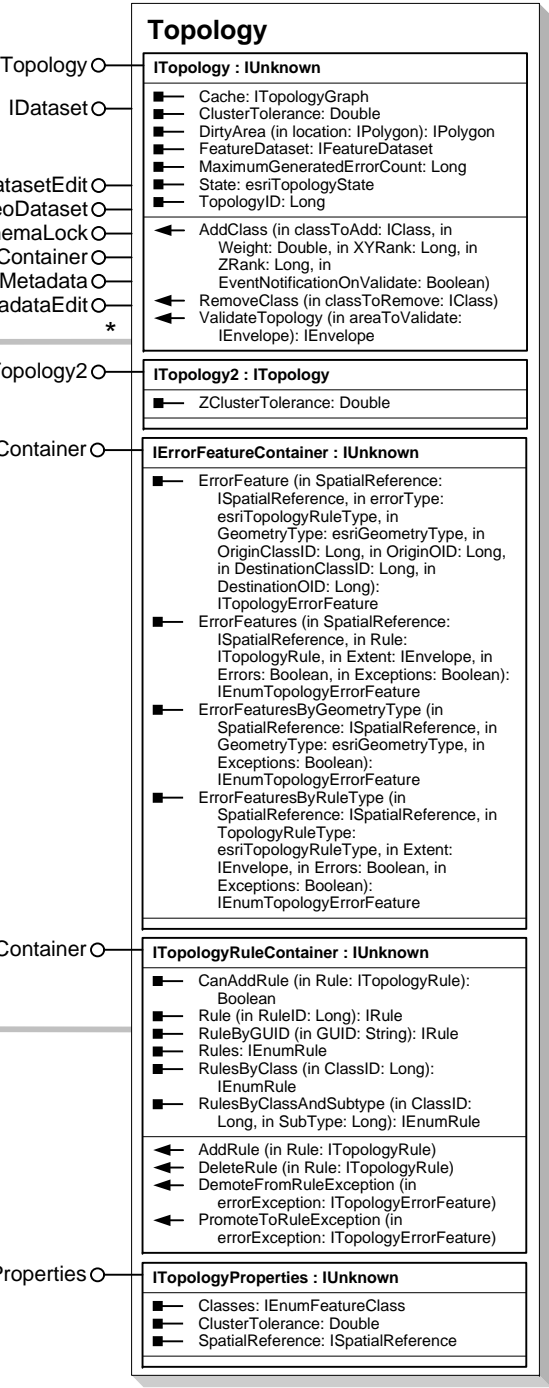
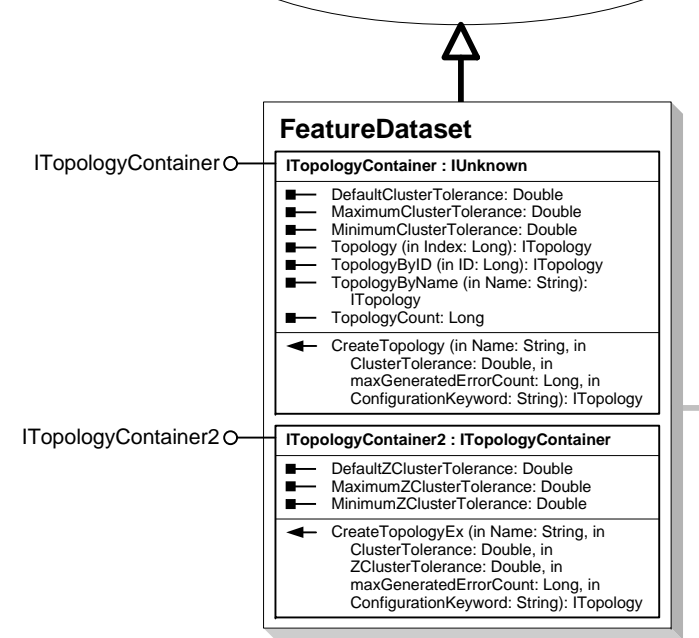
## Topology

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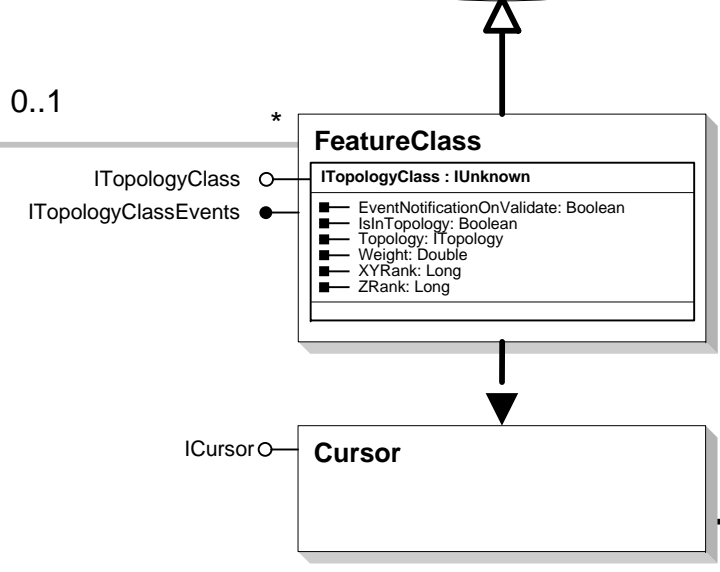
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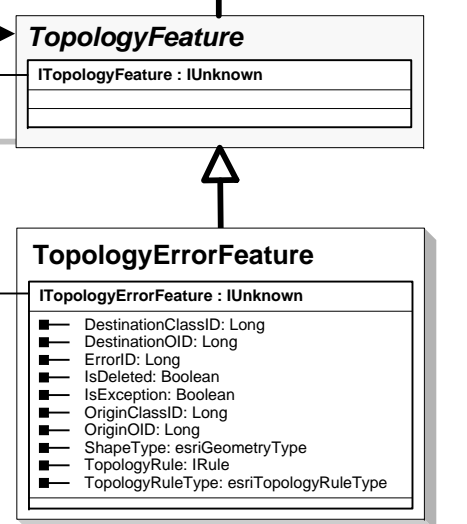
### GeoDataset in Geodatabase Core



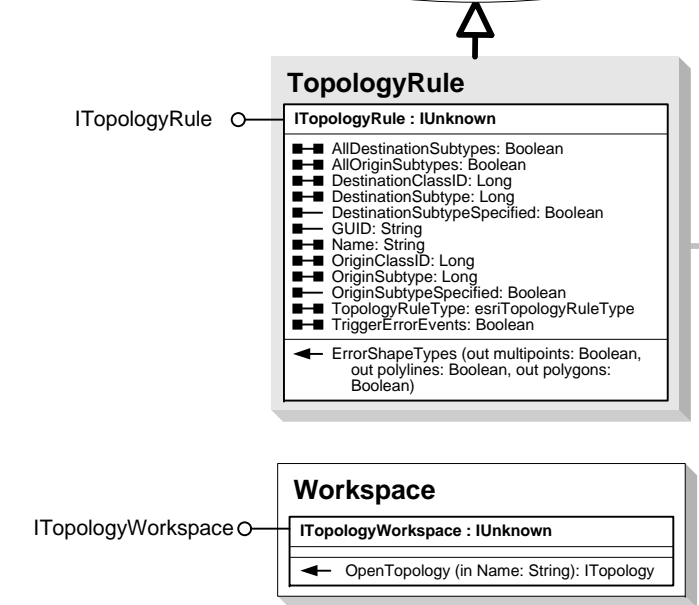
### ObjectClass in Geodatabase Core



### Feature in Geodatabase Core

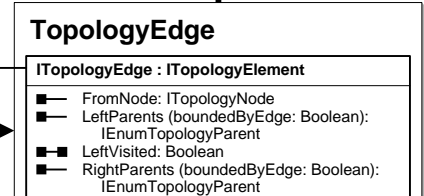
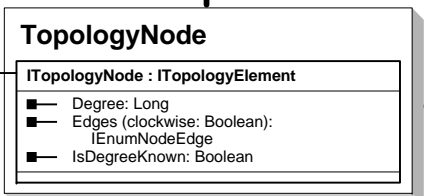


### Rule in Geodatabase Core

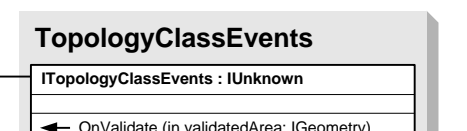
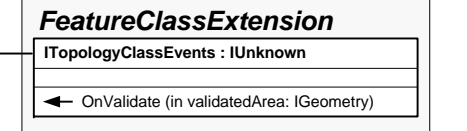


### Enumerations

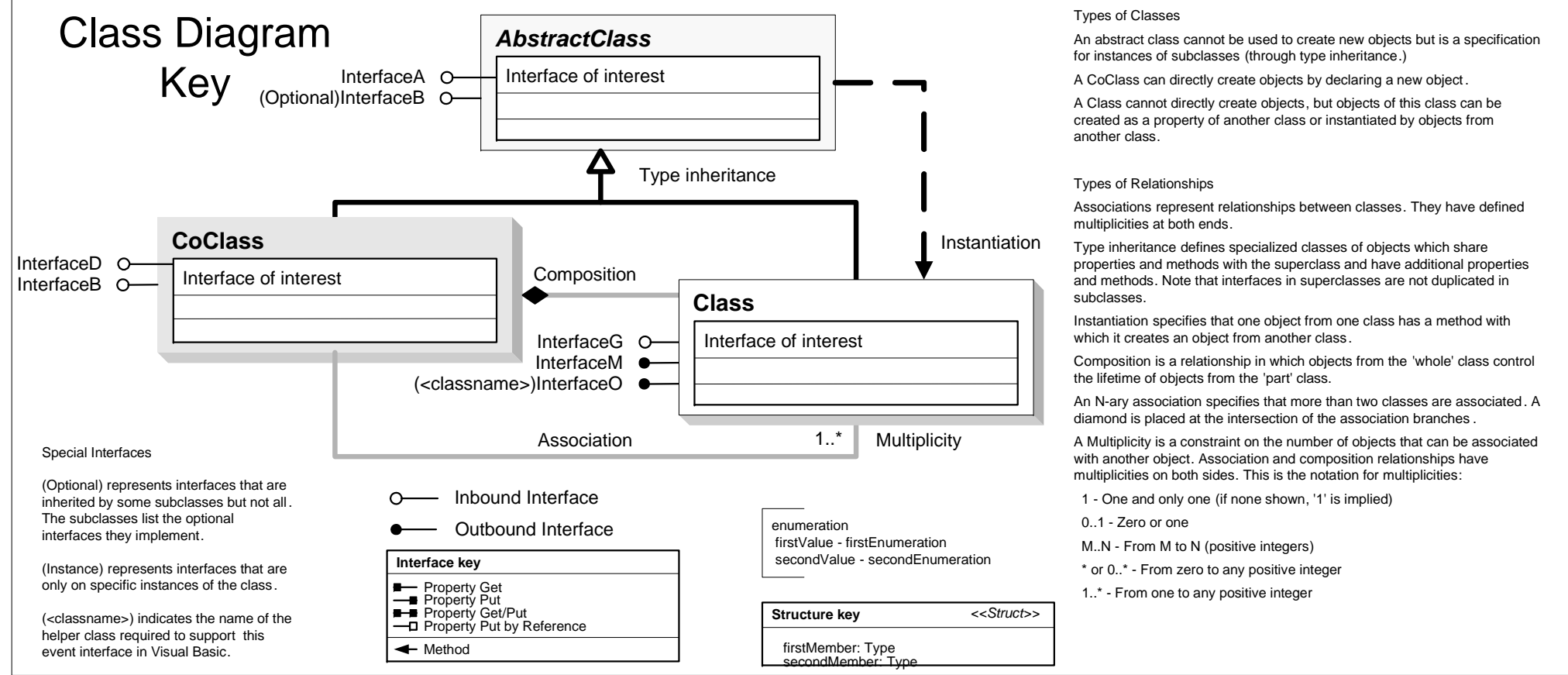
- esriTopologyRuleType
  - 1 - esriTRAny
  - 0 - esriTRFeatureLargerThanClusterTolerance
  - 1 - esriTRAreaNoGaps
  - 3 - esriTRAreaNoOverlap
  - 4 - esriTRAreaCoveredByAreaClass
  - 5 - esriTRAreaCoveredByAreaOther
  - 7 - esriTRAreaCoveredByArea
  - 8 - esriTRAreaNoOverlapArea
  - 10 - esriTRLineCoveredByAreaBoundary
  - 11 - esriTRLineProperlyInsideArea
  - 13 - esriTRPointCoveredByAreaBoundary
  - 15 - esriTRPointProperlyInsideArea
  - 16 - esriTRAreaContainOnePoint
  - 19 - esriTRLineNoOverlap
  - 20 - esriTRLineNoIntersection
  - 21 - esriTRLineNoAngles
  - 22 - esriTRLineNoPseudos
  - 26 - esriTRLineCoveredByLineClass
  - 28 - esriTRLineNoOverlapLine
  - 29 - esriTRPointCoveredByLine
  - 31 - esriTRPointCoveredByLineEndpoint
  - 34 - esriTRPointDisjoint
  - 35 - esriTRPointCoincidePoint
  - 37 - esriTRAreaBoundaryCoveredByLine
  - 38 - esriTRAreaBoundaryCoveredByAreaBoundary
  - 39 - esriTRLineNoSelfOverlap
  - 40 - esriTRLineNoSelfIntersect
  - 41 - esriTRLineNoIntersectOrInteriorTouch
  - 42 - esriTRLineEndpointCoveredByPoint
  - 44 - esriTRLineNoMultipart
  - 45 - esriTRLineNoIntersectLine
  - 46 - esriTRLineNoIntersectOrInteriorTouchLine
- esriTopologySelectionResultEnum
  - 0 - esriTopologySelectionResultNew
  - 1 - esriTopologySelectionResultAdd
  - 2 - esriTopologySelectionResultSubtract
  - 3 - esriTopologySelectionResultXOR
- esriTopologyState
  - 0 - esriTSUnanalyzed
  - 1 - esriTSAnalyzedWithErrors
  - 2 - esriTSAnalyzedWithoutErrors
  - 3 - esriTSEmpty
- esriTopologyElementType
  - 1 - esriTopologyNode
  - 2 - esriTopologyEdge
  - 4 - esriTopologyFace
- esriTopoSide
  - 0 - esriTSLeft
  - 1 - esriTSRight



### ObjectClassExtension in Geodatabase Core



# Class Diagram



**Types of Classes**  
 An abstract class cannot be used to create new objects but is a specification for instances of subclasses (through type inheritance.)  
 A CoClass can not directly create objects by declaring a new object.  
 A Class cannot directly create objects, but objects of this class can be created as a property of another class or instantiated by objects from another class.

**Types of Relationships**  
 Associations represent relationships between classes. They have defined multiplicities at both ends.  
 Type inheritance defines specialized classes of objects which share properties and methods with the superclass and have additional properties and methods. Note that interfaces in superclasses are not duplicated in subclasses.  
 Instantiation specifies that one object from one class has a method with which it creates an object from another class.  
 Composition is a relationship in which objects from the 'whole' class control the lifetime of objects from the 'part' class.  
 An N-ary association specifies that more than two classes are associated. A diamond is placed at the intersection of the association branches.  
 A Multiplicity is a constraint on the number of objects that can be associated with another object. Association and composition relationships have multiplicities on both sides. This is the notation for multiplicities:  
 1 - One and only one (if none shown, '1' is implied)  
 0..1 - Zero or one  
 M..N - From M to N (positive integers)  
 \* or 0..\* - From zero to any positive integer  
 1..\* - From one to any positive integer

**Special Interfaces**  
 (Optional) represents interfaces that are inherited by some subclasses but not all. The subclasses list the optional interfaces they implement.  
 (Instance) represents interfaces that are only on specific instances of the class.  
 (classname) indicates the name of the helper class required to support this event interface in Visual Basic.

**Interface key**  
 ■ Property Get  
 ■ Property Put  
 ■ Property Get/Put  
 ■ Property Put by Reference  
 ← Method

**Structure key** <<Struct>>  
 ■ firstMember: Type  
 ■ secondMember: Type

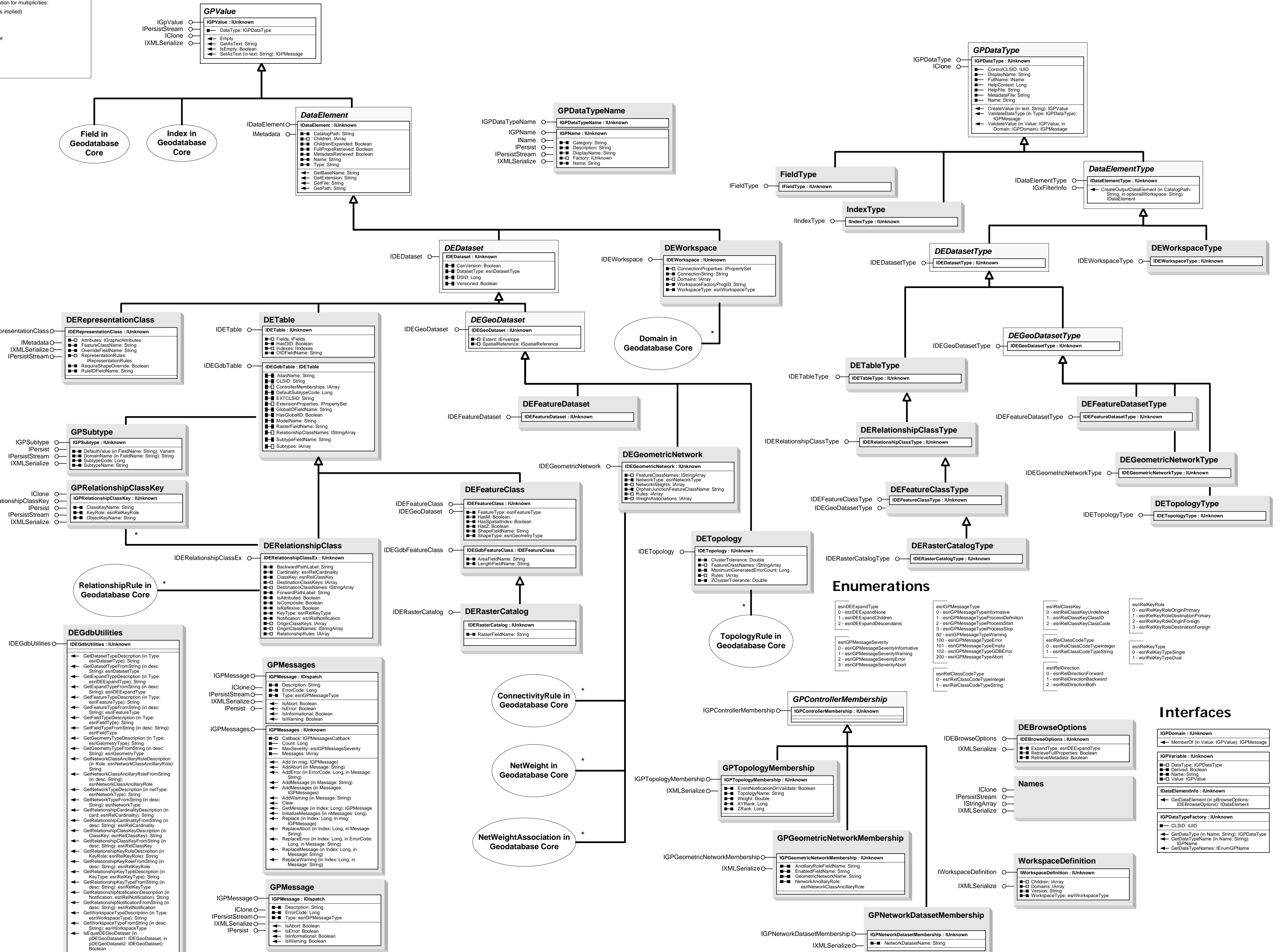
**enumeration**  
 firstValue - firstEnumeration  
 secondValue - secondEnumeration

# Geodatabase Object Model

## Data Elements

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# Geodatabase Object Model

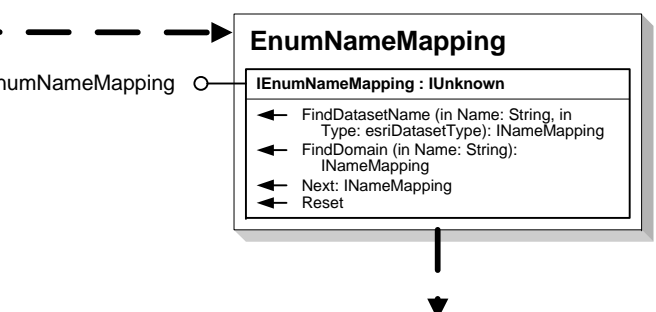
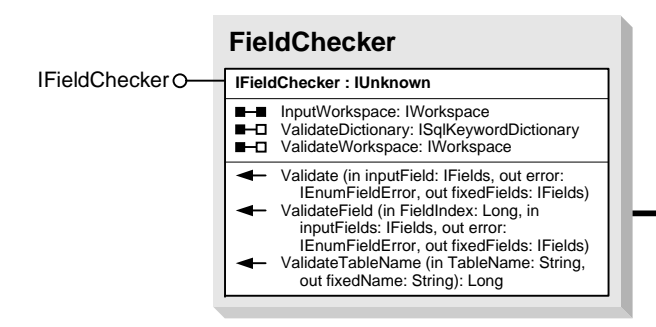
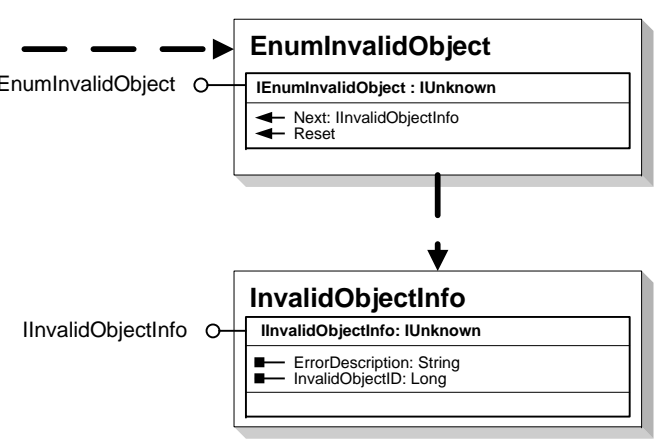
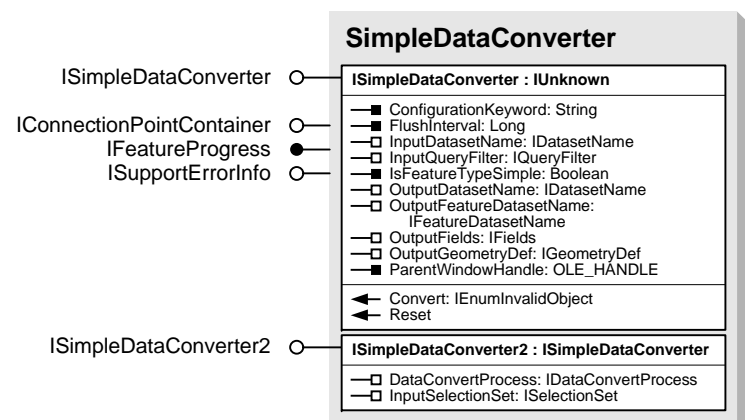
## Data Transfer

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# Distributed Geodatabase Core Objects

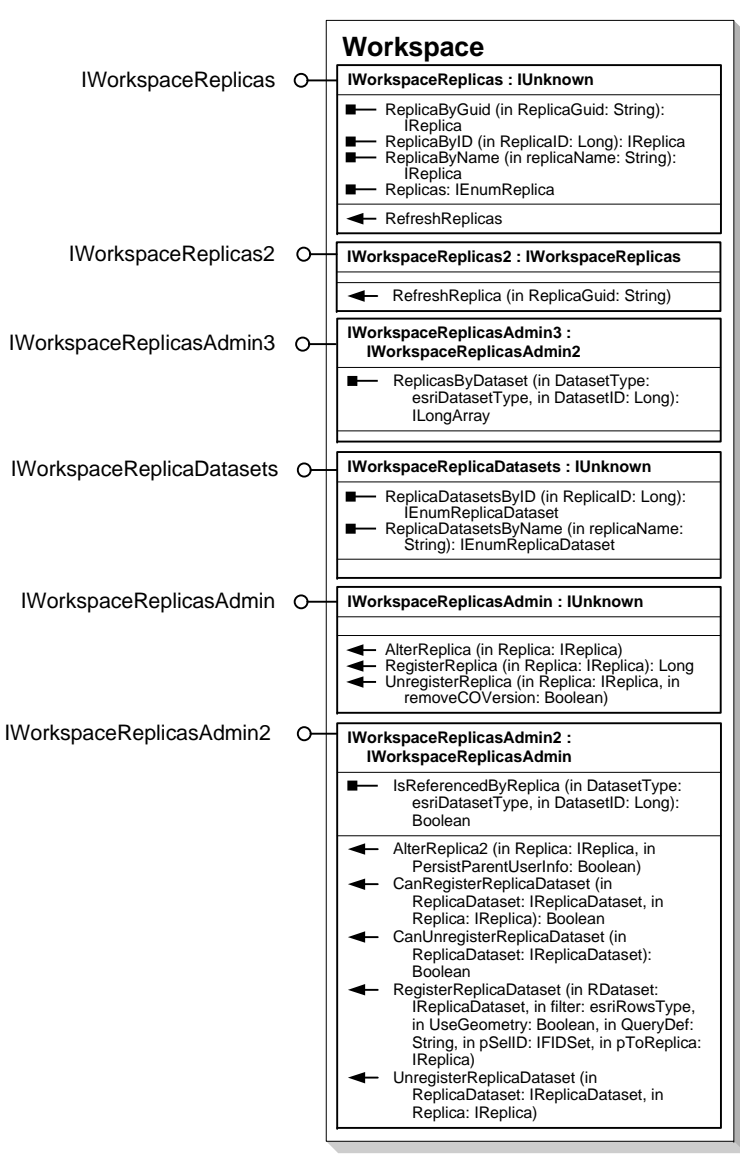
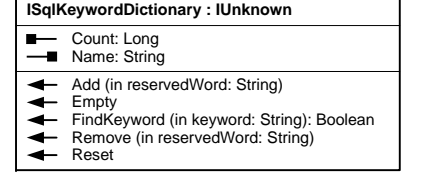
## DataConverter Objects



## Enumerations

- esriDataConverterError
  - 0 - S\_DATACONVERTER\_OK
  - 513 - E\_DATACONVERTER\_OPENFEATURECLASSFAILED
  - 514 - E\_DATACONVERTER\_OPENTABLEFAILED
  - 515 - E\_DATACONVERTER\_OPENFEATUREDATASETFAILED
  - 516 - E\_DATACONVERTER\_OPENFEATUREWORKSPACEFAILED
  - 517 - E\_DATACONVERTER\_CREATEFEATURECLASSFAILED
  - 518 - E\_DATACONVERTER\_CREATETABLEFAILED
  - 519 - E\_DATACONVERTER\_WRITEFEATURESFAILED
  - 520 - E\_DATACONVERTER\_WRITEROWSFAILED
  - 521 - E\_DATACONVERTER\_UNLOADFAILED
  - 522 - E\_DATACONVERTER\_OPENCURSORFAILED
  - 523 - E\_DATACONVERTER\_ACQUIRESCHEMALOCKFAILED
  - 524 - E\_DATACONVERTER\_INSERTCURSORFAILED
  - 525 - E\_DATACONVERTER\_CANCELLED
  - 526 - E\_DATACONVERTER\_MATCHINPUTFIELDSETFAILED
  - 527 - E\_DATACONVERTER\_FLUSHINSERTCURSORFAILED
  - 528 - E\_DATACONVERTER\_ACQUIRESCHEMALOCKFAILED
  - 529 - E\_DATACONVERTER\_INVALID\_INPUT\_DATASET\_NAME
  - 530 - E\_DATACONVERTER\_CANNOT\_CREATE\_FEATURE\_DATASET
  - 531 - E\_DATACONVERTER\_ERROR\_READ\_ROWS
  - 532 - E\_DATACONVERTER\_ERROR\_READ\_ALL\_ROWS
- esriFieldNameErrorType
  - 0 - esriNoFieldError
  - 1 - esriSQLReservedWord
  - 2 - esriDuplicatedFieldName
  - 3 - esriInvalidCharacter
  - 4 - esriInvalidFieldNameLength

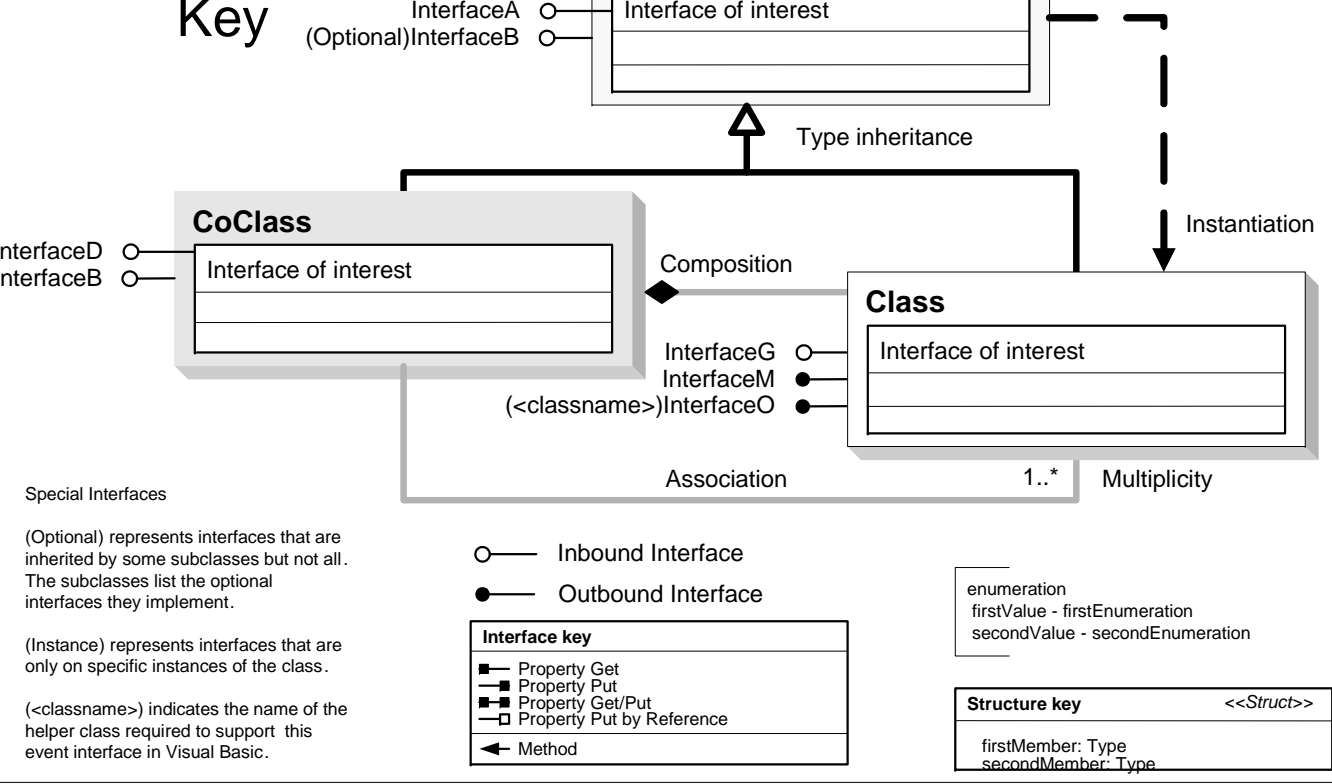
## Interfaces



## Enumerations

- esriDataExtractionType
  - 1 - esriDataExtraction
  - 2 - esriDataCheckOut
  - 3 - esriDataReplication
  - 4 - esriDataXMLExport
  - 5 - esriDataXMLCheckOut
  - 6 - esriDataXMLExtraction
  - 7 - esriDataXMLReplication
  - 8 - esriRegisterXMLCheckOut
  - 9 - esriRegisterCheckOut
  - 10 - esriRegisterXMLReplica
  - 11 - esriRegisterReplica
- esriReplicaType
  - 1 - esriReplicaTypeChild
  - 2 - esriReplicaTypeParent
  - 3 - esriCheckOutTypeChild
  - 4 - esriCheckOutTypeParent
  - 15 - esriReplicaTypeAny
- esriRowsType
  - 0 - esriRowsTypeNone
  - 1 - esriRowsTypeAll
  - 2 - esriRowsTypeFilter
- esriReplicaAccessType
  - 0 - esriReplicaAccessNone
  - 1 - esriReplicaChildReadOnly
  - 2 - esriReplicaParentReadOnly
  - 3 - esriReplicaBothReadWrite
  - 4 - esriReplicaParentOrChildReadOnly
- esriReplicaModelType
  - 1 - esriModelTypeSimple
  - 2 - esriModelTypeFullGeodatabase

## Class Diagram



Types of Classes  
An abstract class cannot be used to create new objects but is a specification for instances of subclasses (through type inheritance.)  
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(Instance) represents interfaces that are only on specific instances of the class.  
(<classname>) indicates the name of the helper class required to support this event interface in Visual Basic.

Interface key  
- Property Get  
- Property Put  
- Property Get/Put  
- Property Put by Reference  
- Method

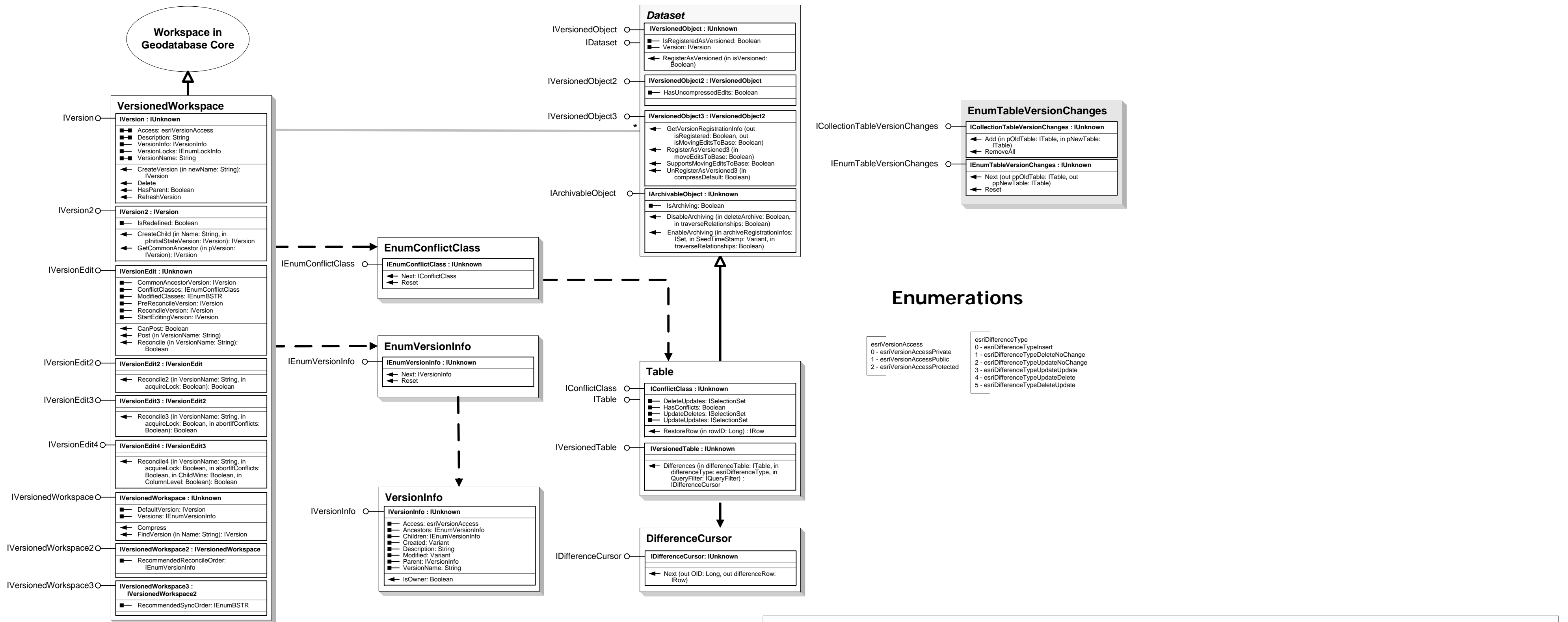
Structure key  
<<Struct>>  
firstMember: Type  
secondMember: Type

# Geodatabase Object Model

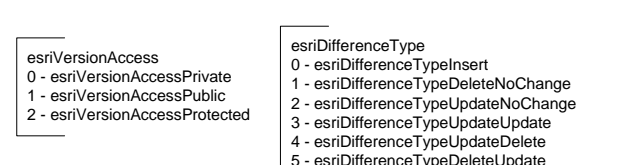
## Versioning

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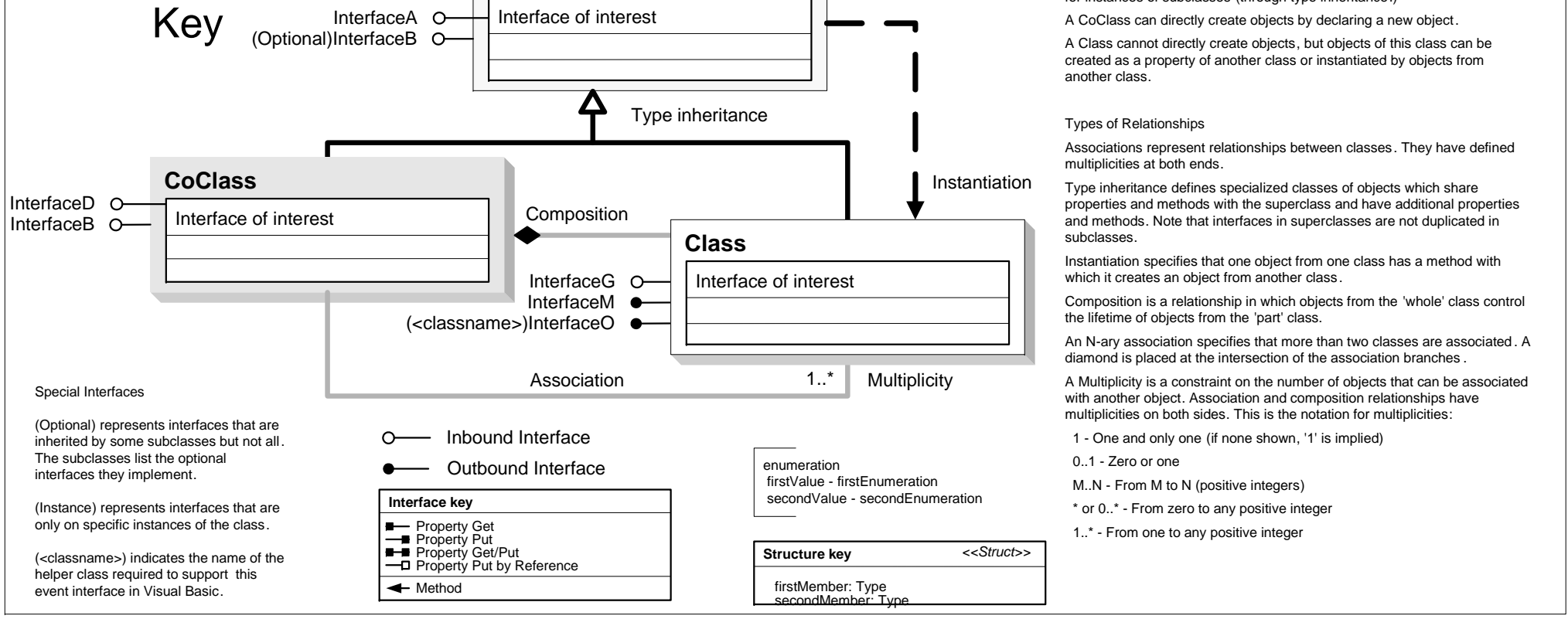
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### Enumerations



### Class Diagram Key

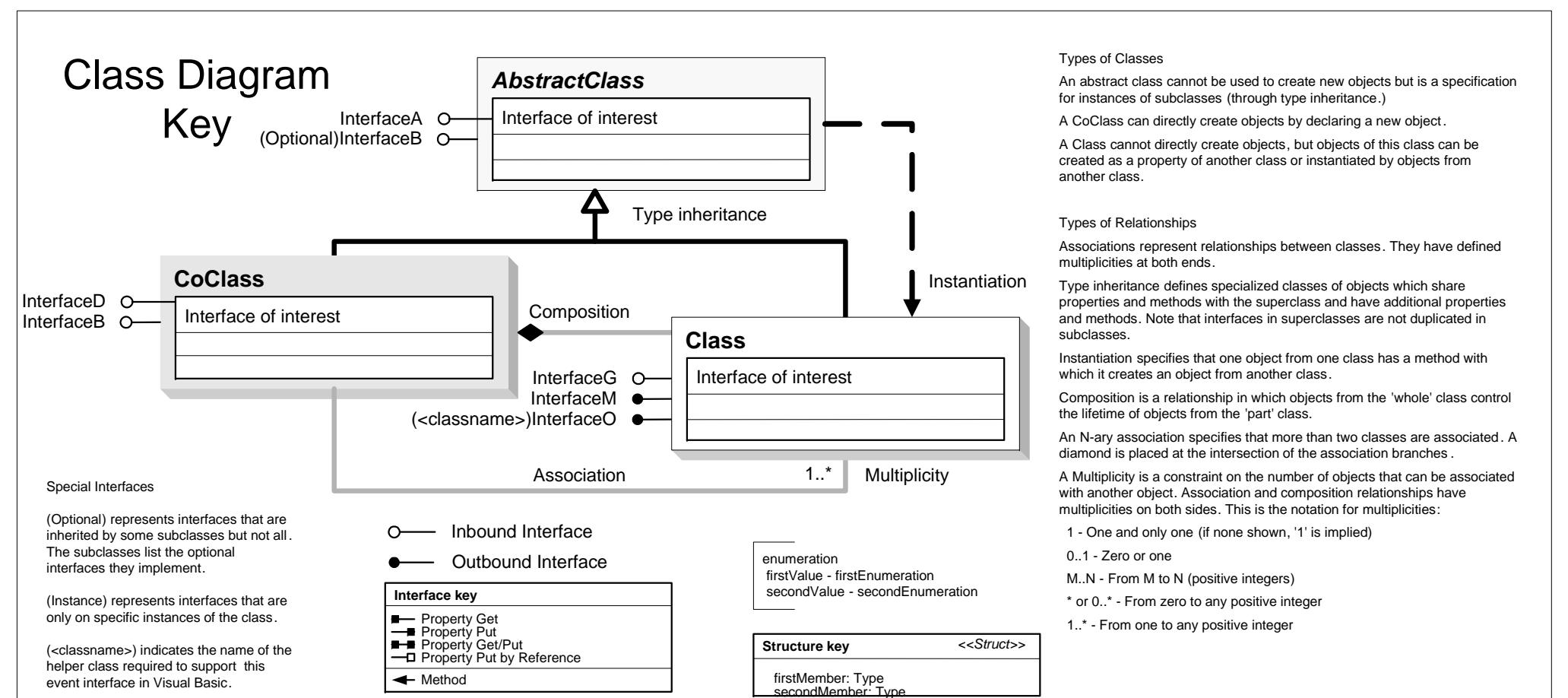
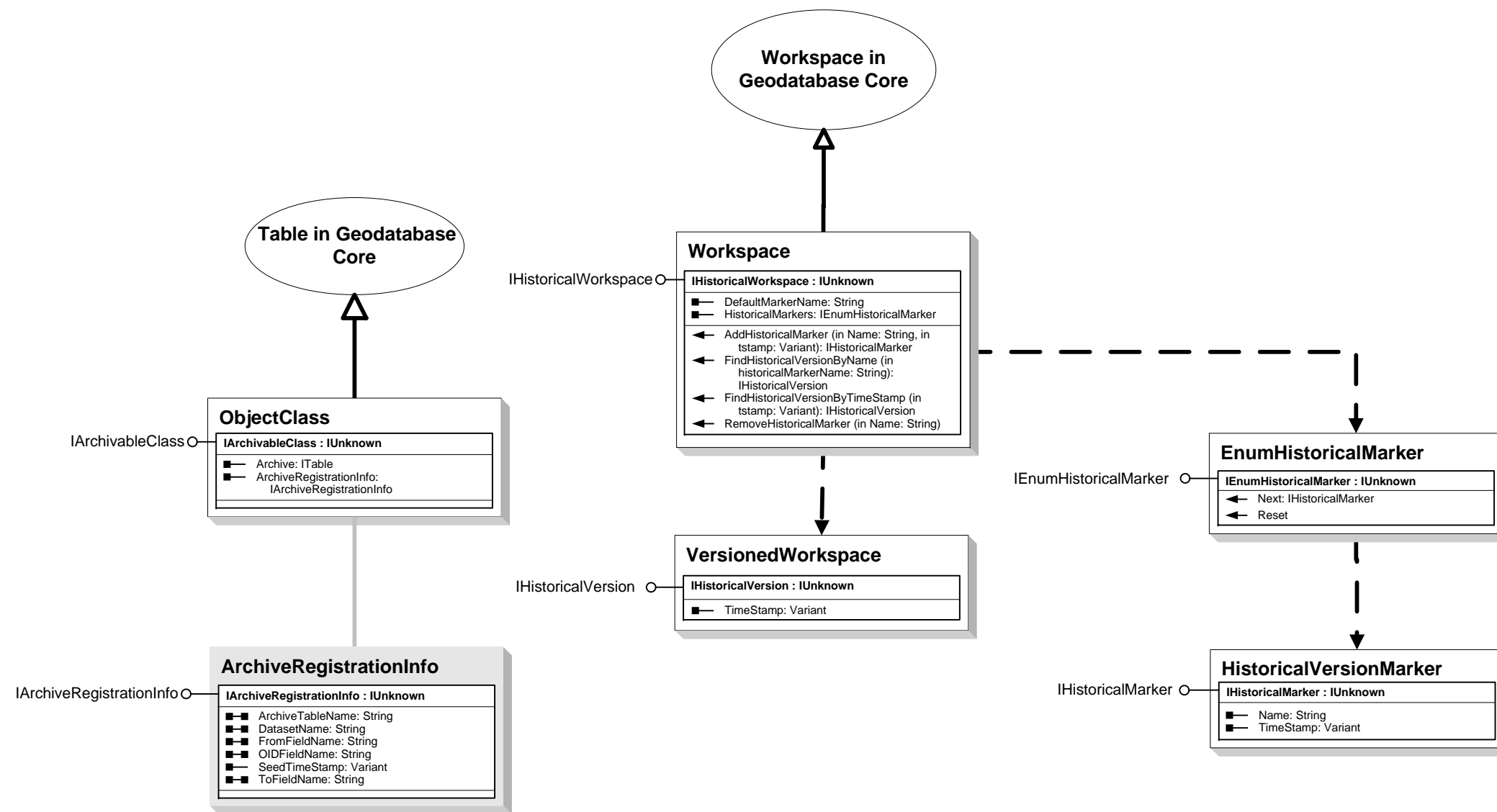


# Geodatabase Object Model

## Archiving

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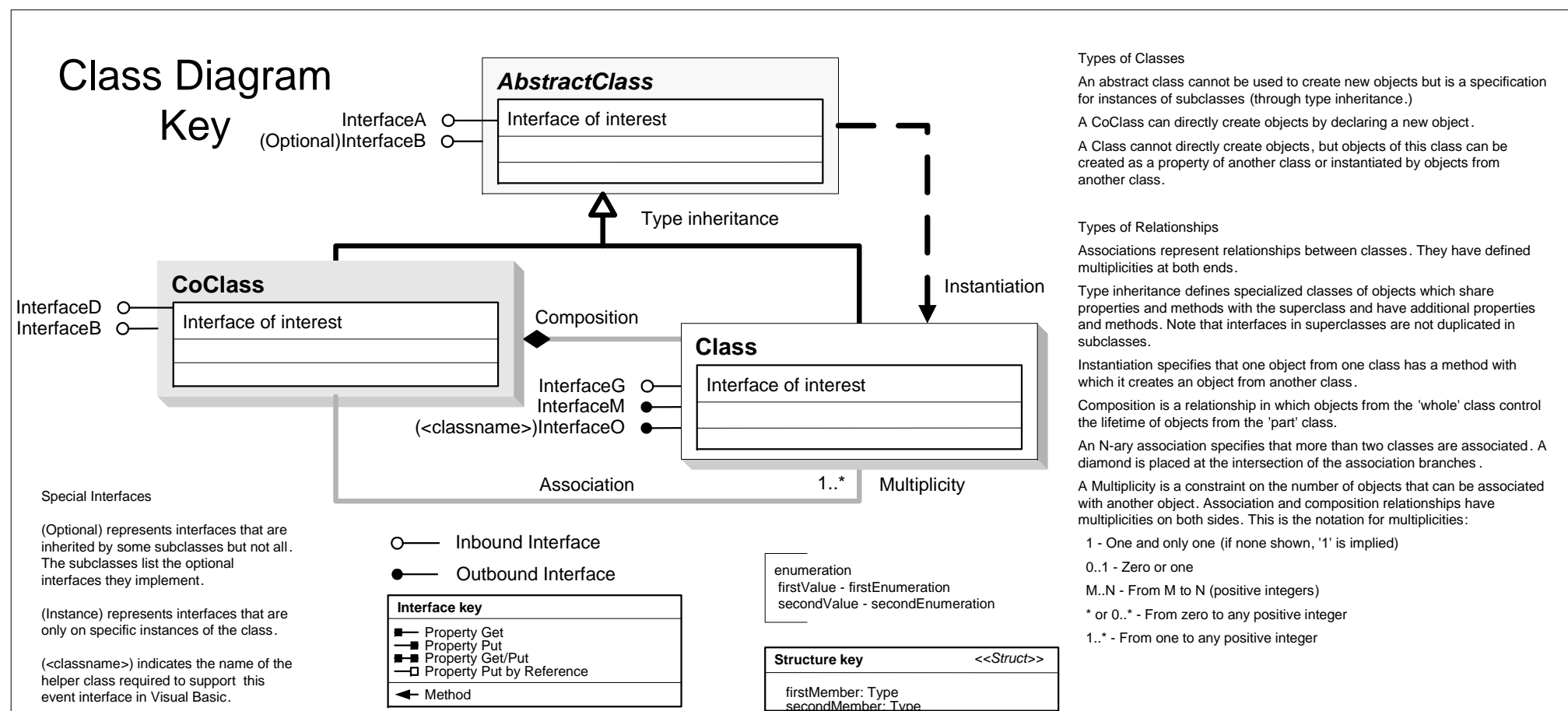
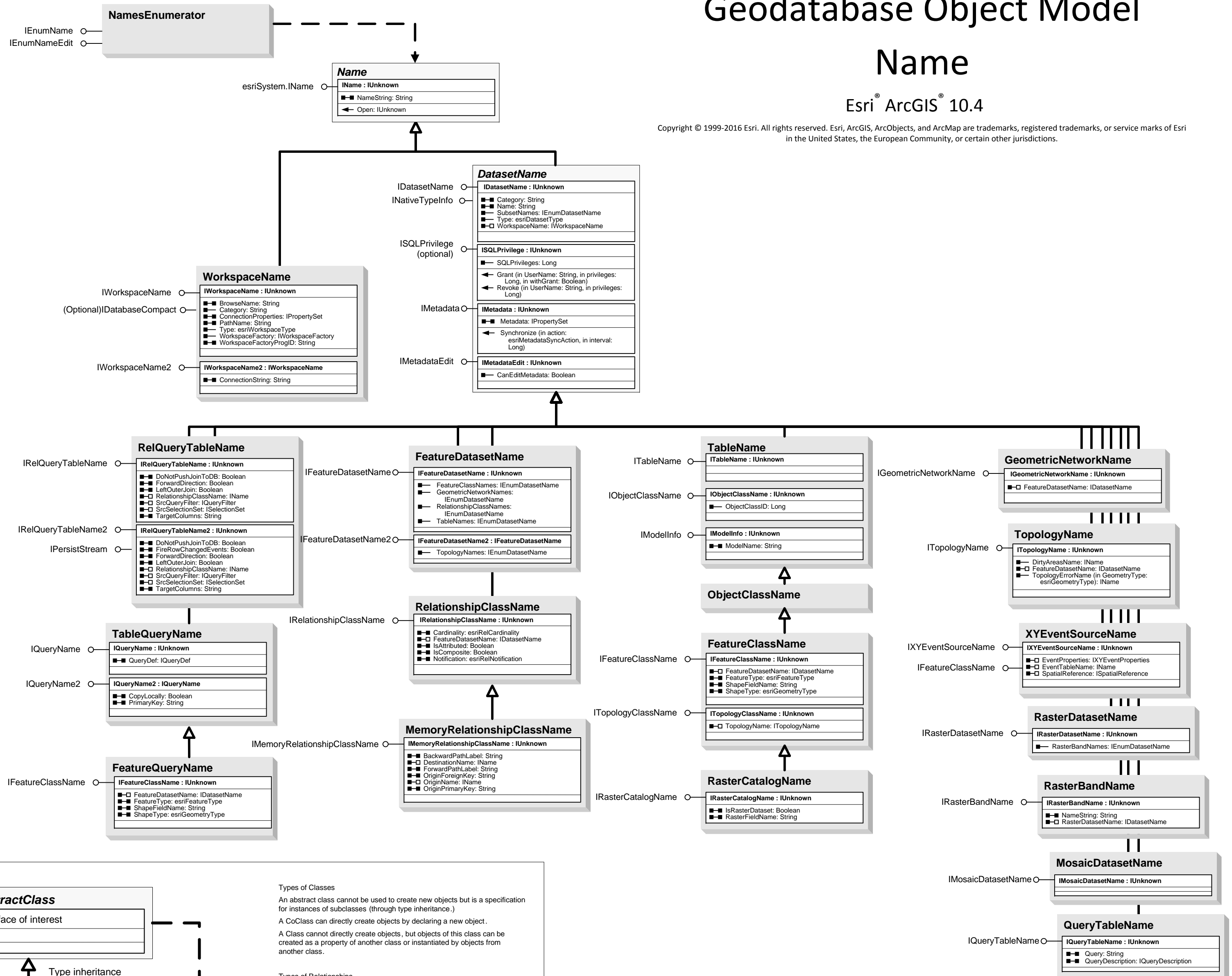


# Geodatabase Object Model

## Name

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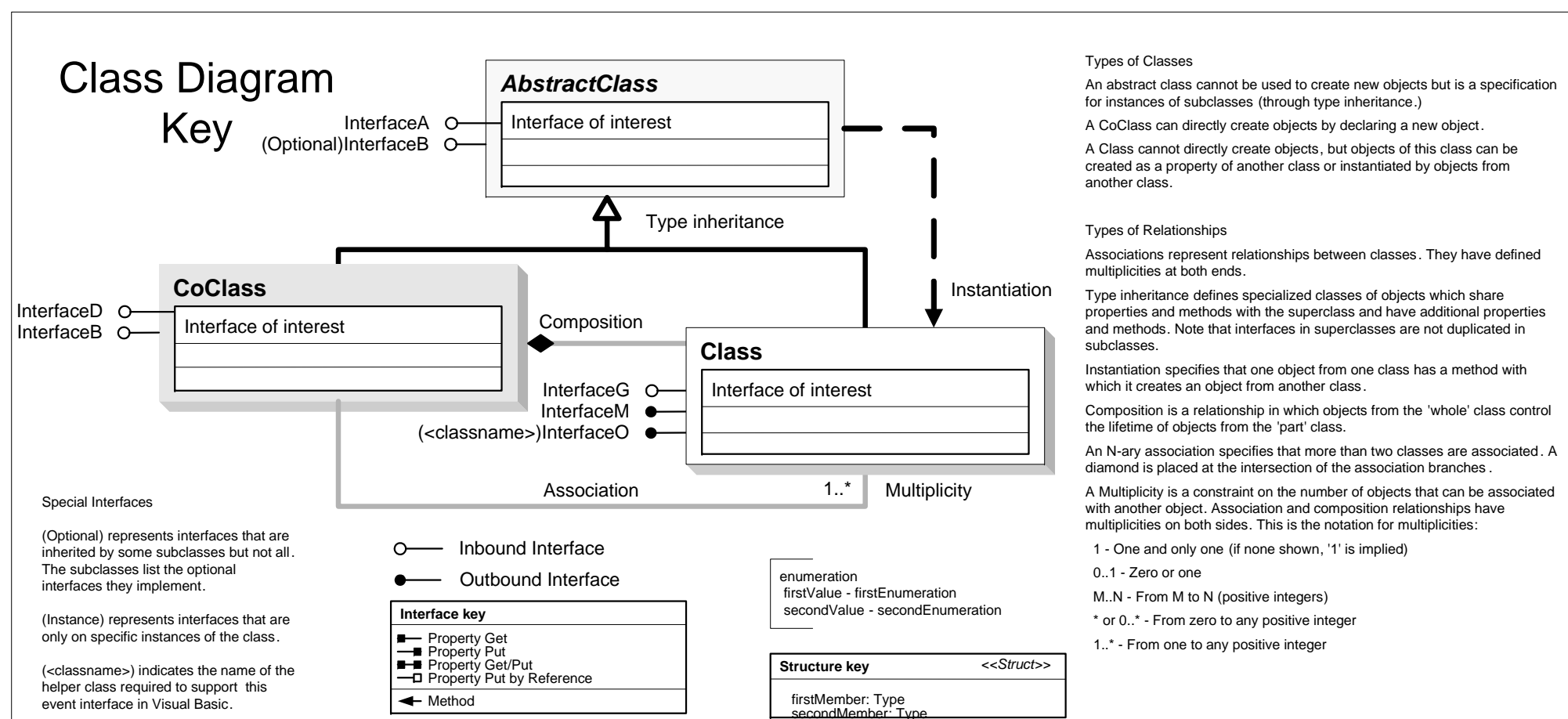
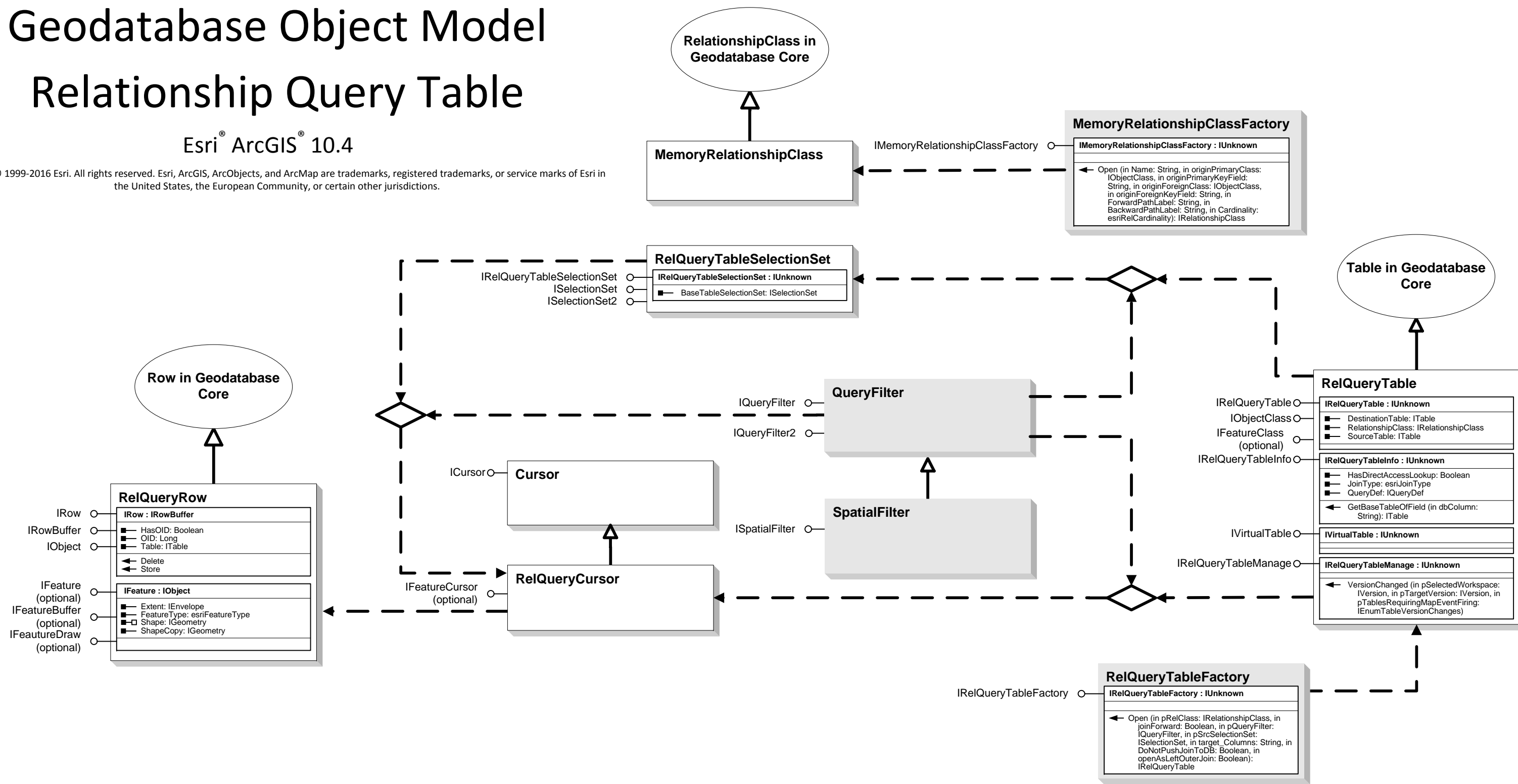


# Geodatabase Object Model

## Relationship Query Table

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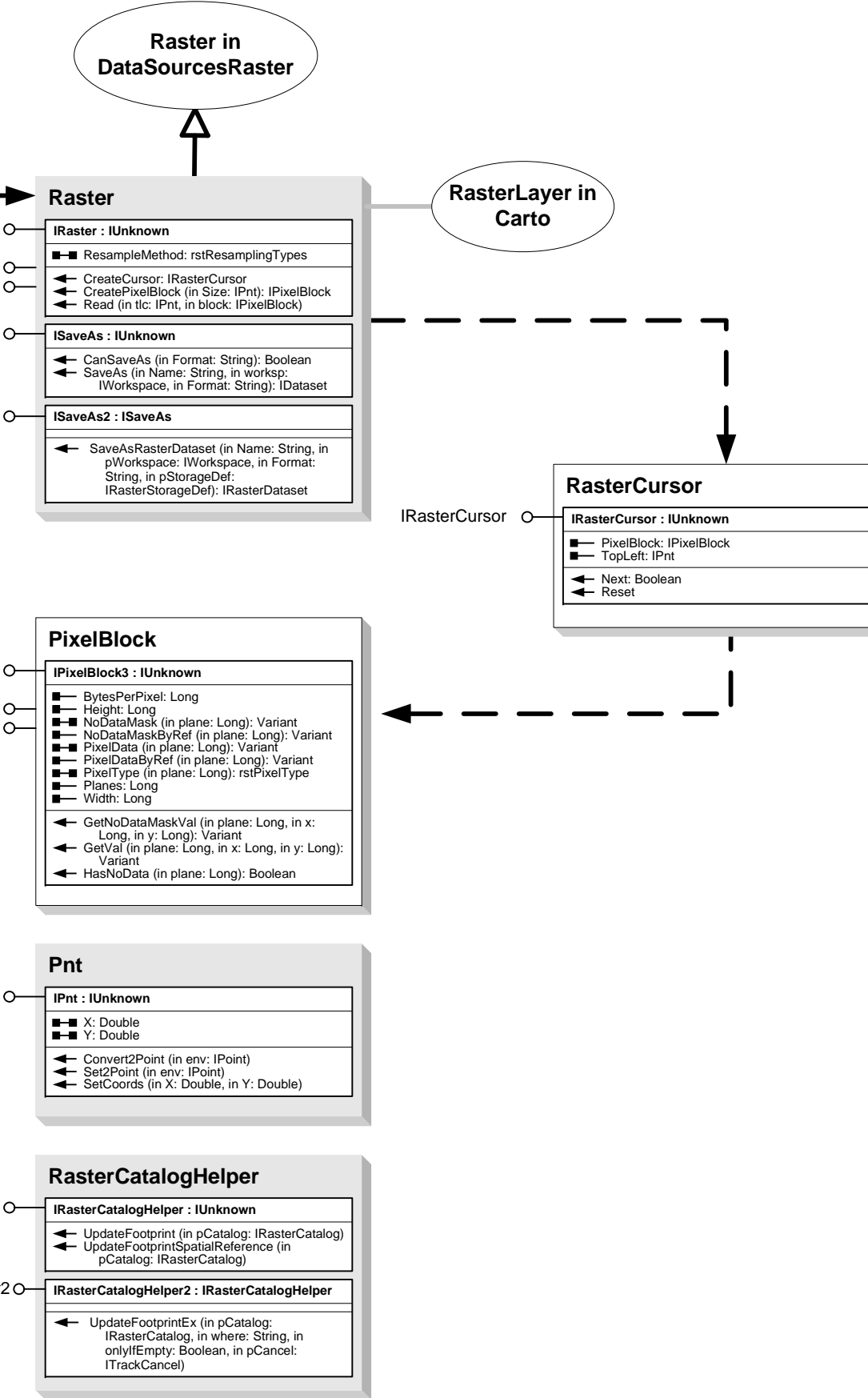
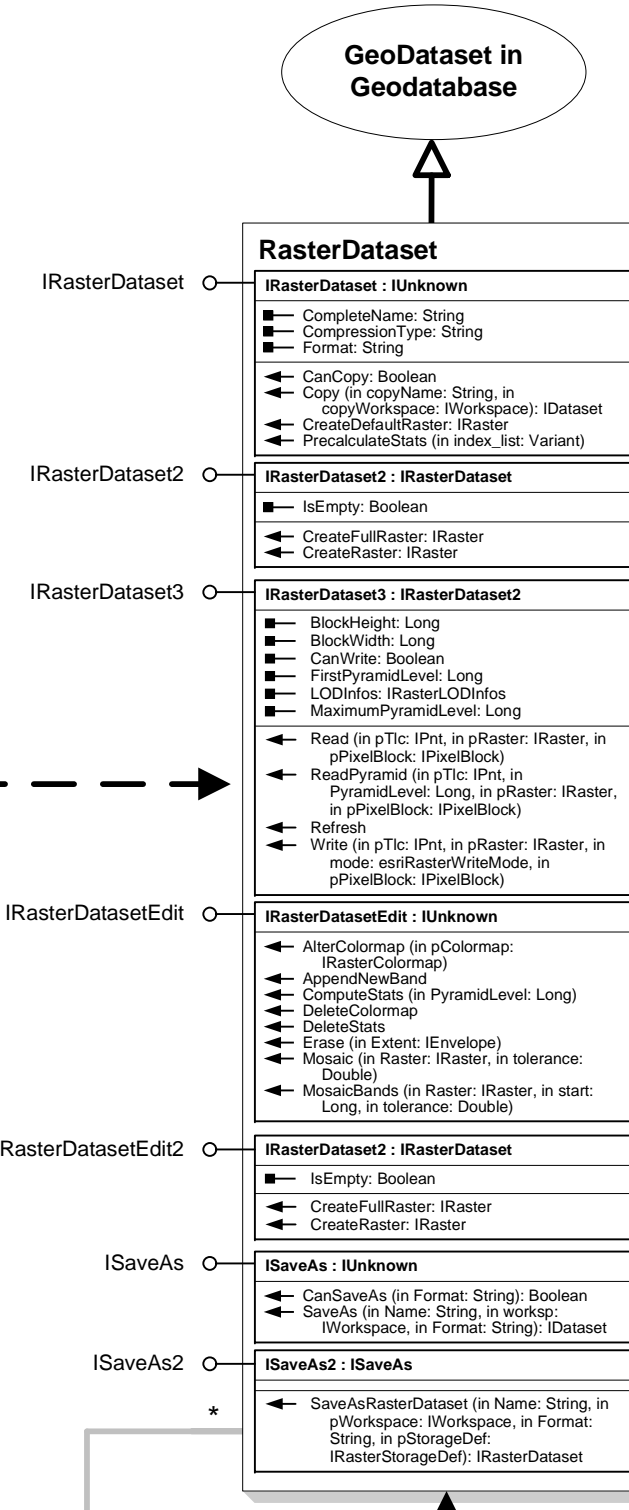
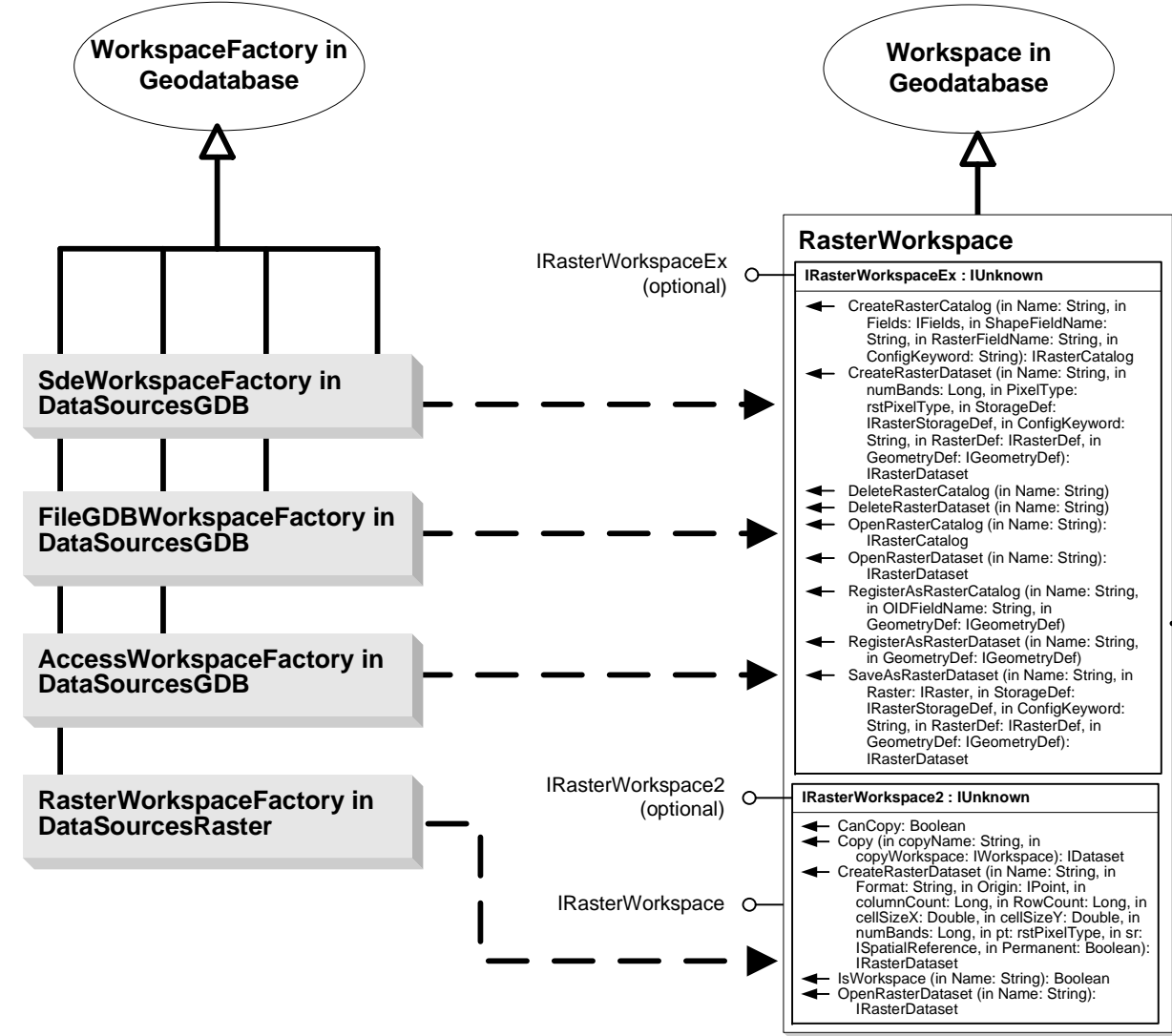


# Geodatabase Object Model

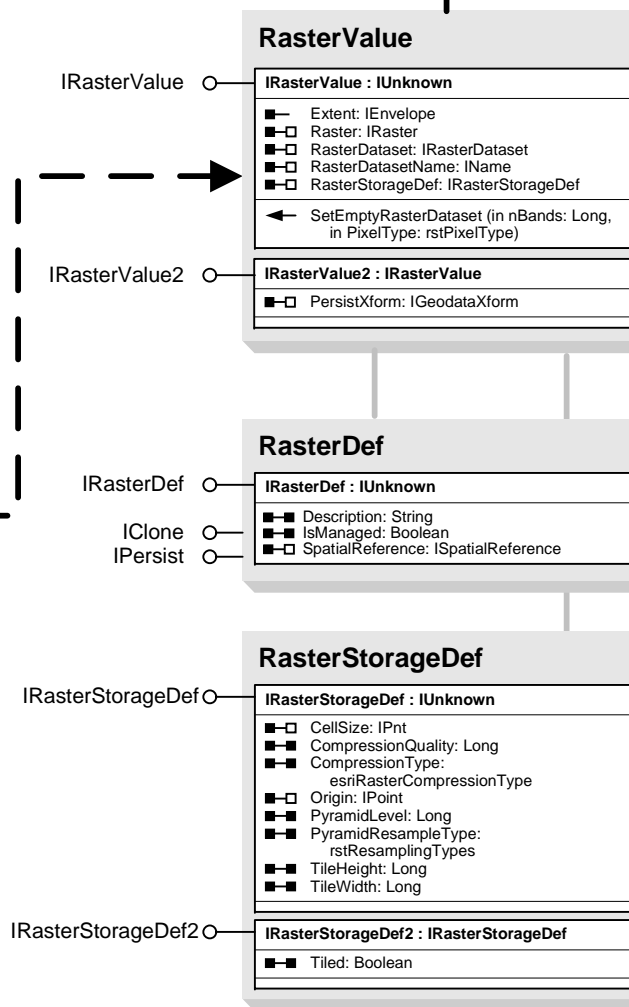
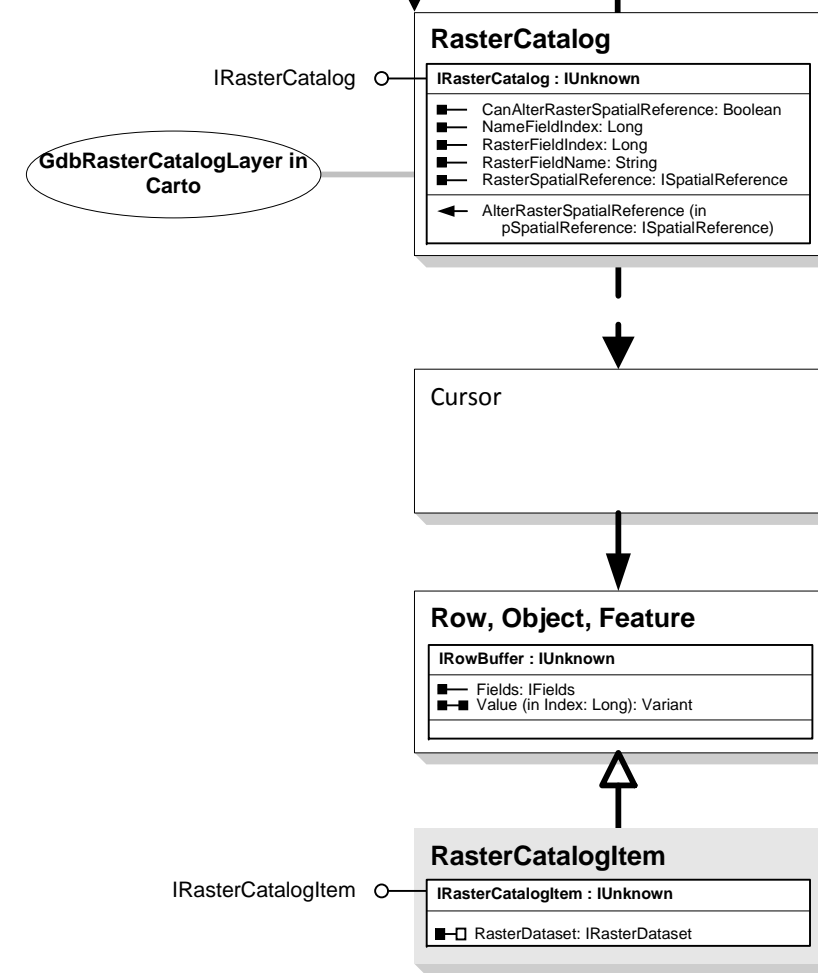
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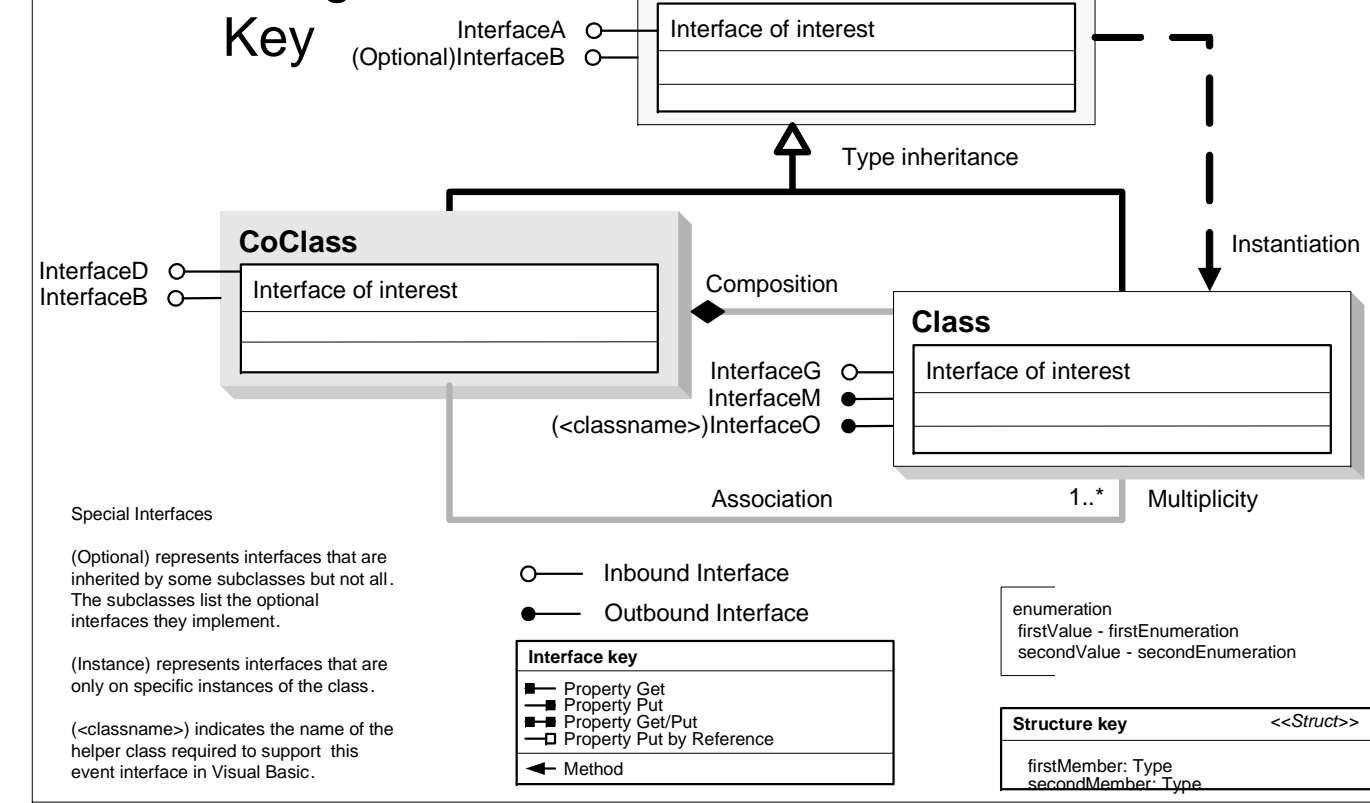
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### Table, ObjectClass, FeatureClass in Geodatabase



### Class Diagram Key



Types of Classes  
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 (Optional) represents interfaces that are inherited by some subclasses but not all. The subclasses list the optional interfaces they implement.  
 (Instance) represents interfaces that are only on specific instances of the class.  
 (<classname>) indicates the name of the helper class required to support this event interface in Visual Basic.

Enumeration  
 firstValue - firstEnumeration  
 secondValue - secondEnumeration

Structure key  
 <<Struct>>  
 firstMember: Type  
 secondMember: Type

### Enumerations

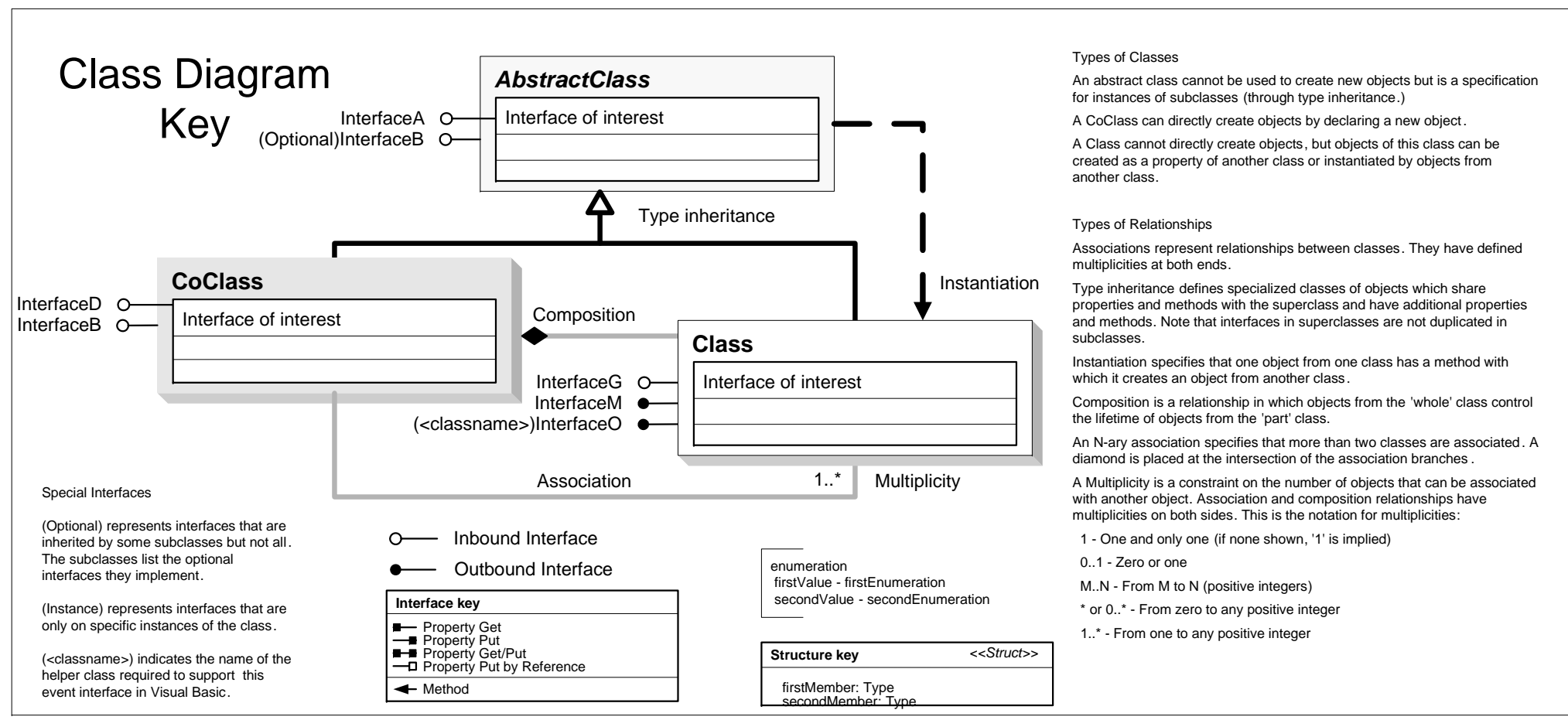
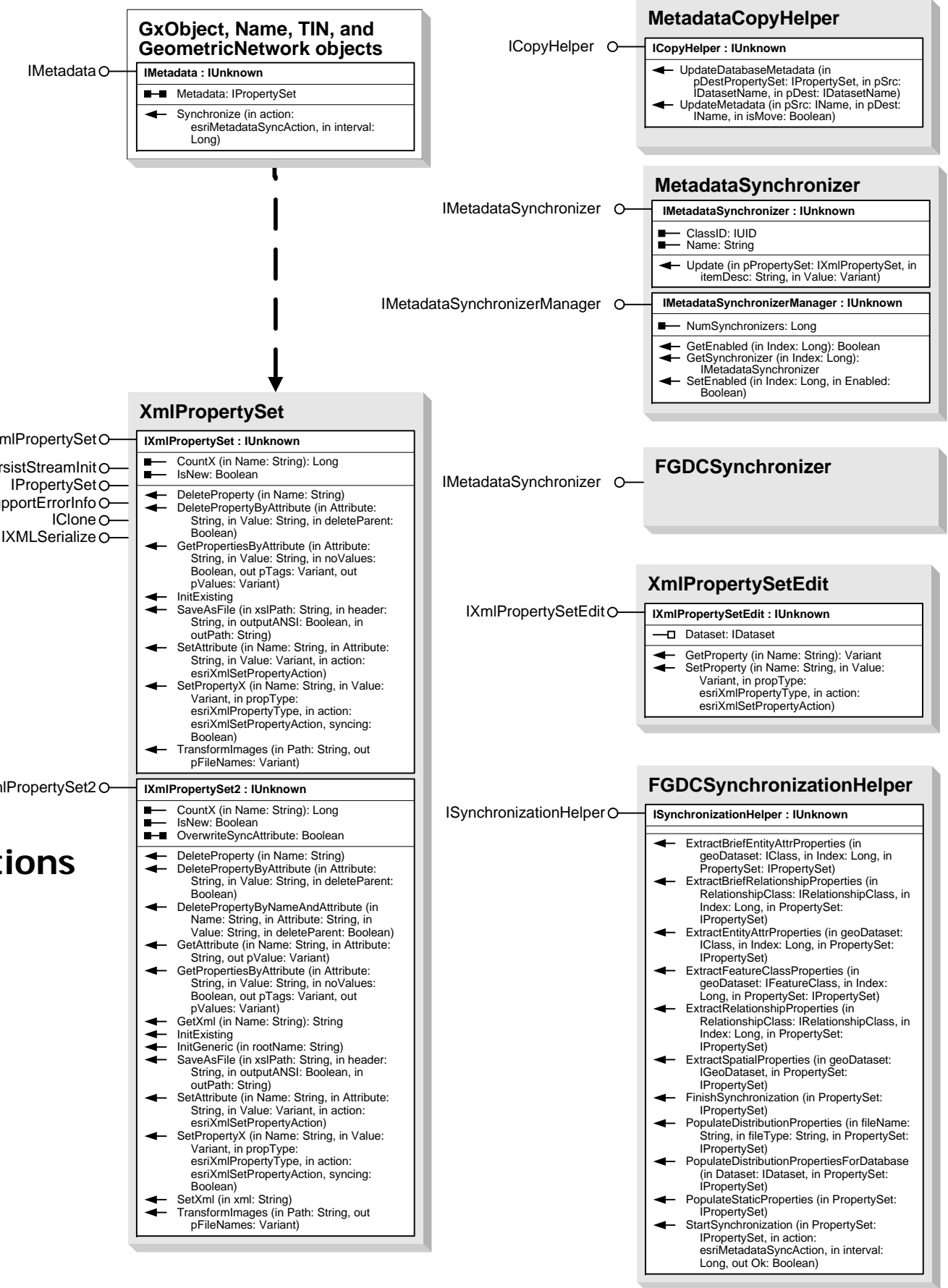
- rsrPixelType
  - 1 - PT\_UNKNOWN
  - 0 - PT\_U1
  - 1 - PT\_U2
  - 2 - PT\_U4
  - 3 - PT\_UCHAR
  - 4 - PT\_CHAR
  - 5 - PT\_USHORT
  - 6 - PT\_SHORT
  - 7 - PT\_USLONG
  - 8 - PT\_LONG
  - 9 - PT\_FLOAT
  - 10 - PT\_DOUBLE
  - 11 - PT\_COMPLEX
  - 12 - PT\_DCOMPLEX
  - 13 - PT\_CSHORT
  - 14 - PT\_CLONG
- rsrResamplingTypes
  - 0 - RSP\_NearestNeighbor
  - 1 - RSP\_BilinearInterpolation
  - 2 - RSP\_CubicConvolution
  - 3 - RSP\_Majority
- esriRasterSocCompressionTypeEnum
  - 0 - esriRasterSocCompressionTypeUncompressed
  - 1 - esriRasterSocCompressionTypeRunLength
  - 2 - esriRasterSocCompressionTypeJPEG
  - 3 - esriRasterSocCompressionTypeJPEG2000
- esriRasterCompressionType
  - 1 - esriRasterCompressionUnknown
  - 0 - esriRasterCompressionUncompressed
  - 1 - esriRasterCompressionZ77
  - 2 - esriRasterCompressionJPEG
  - 4 - esriRasterCompressionJPEG2000
  - 5 - esriRasterCompressionPackBits
  - 6 - esriRasterCompressionLZW
  - 7 - esriRasterCompressionBLE
  - 8 - esriRasterCompressionCITTG3
  - 9 - esriRasterCompressionCITTG4
  - 10 - esriRasterCompressionCITTLE

# Geodatabase Object Model

## Metadata

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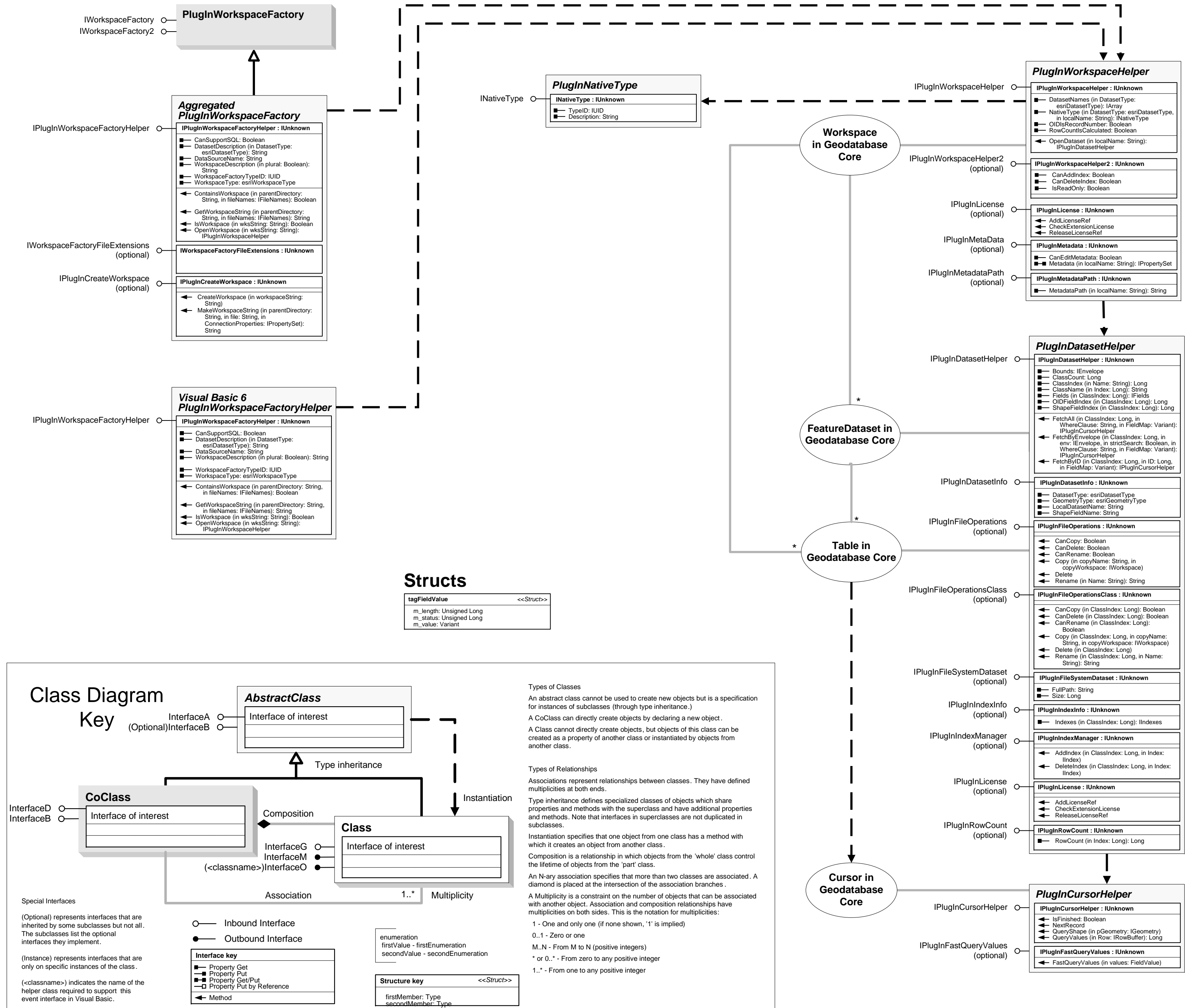


# Geodatabase Object Model

## Plug-in Data Source

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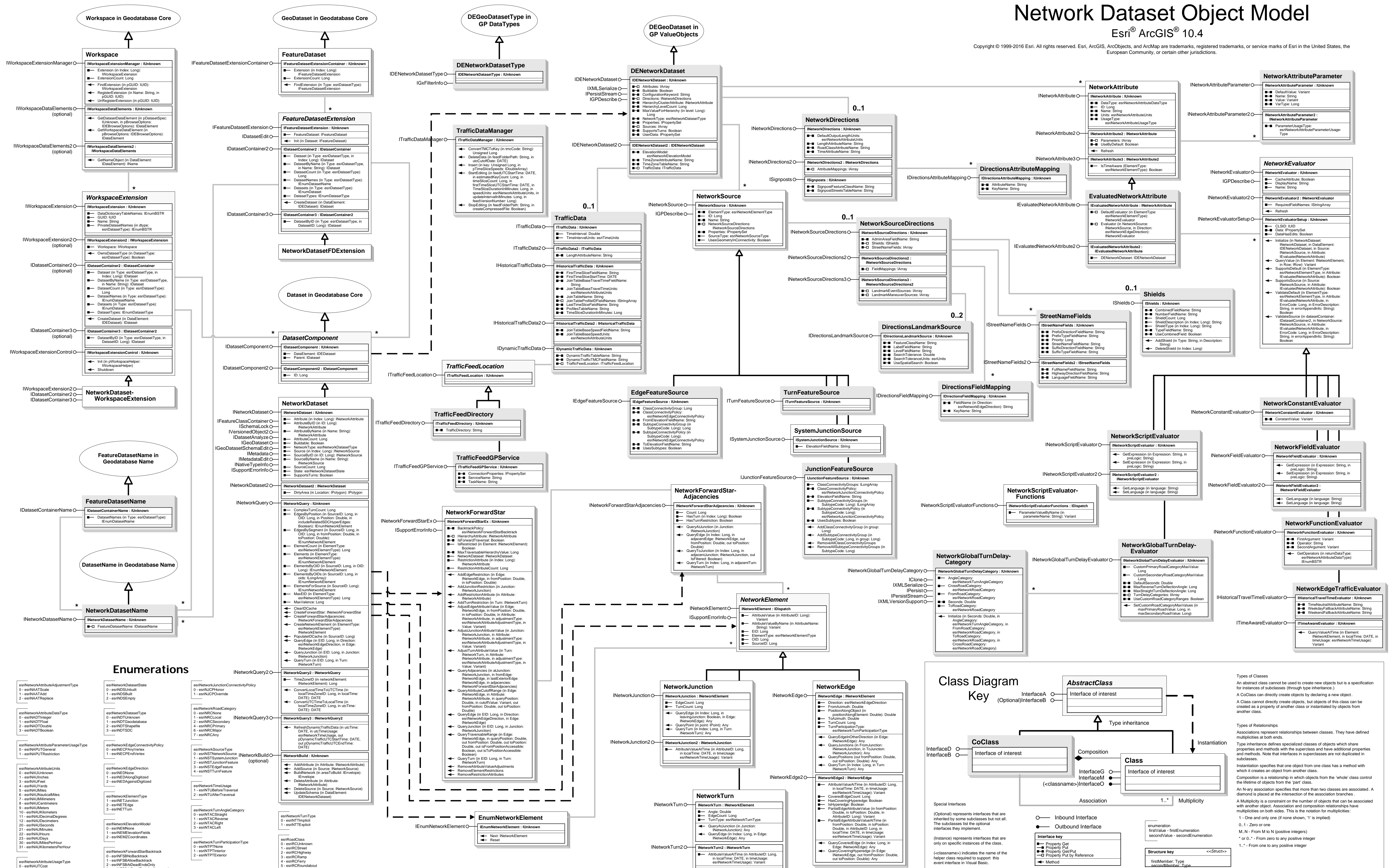
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# Network Dataset Object Model

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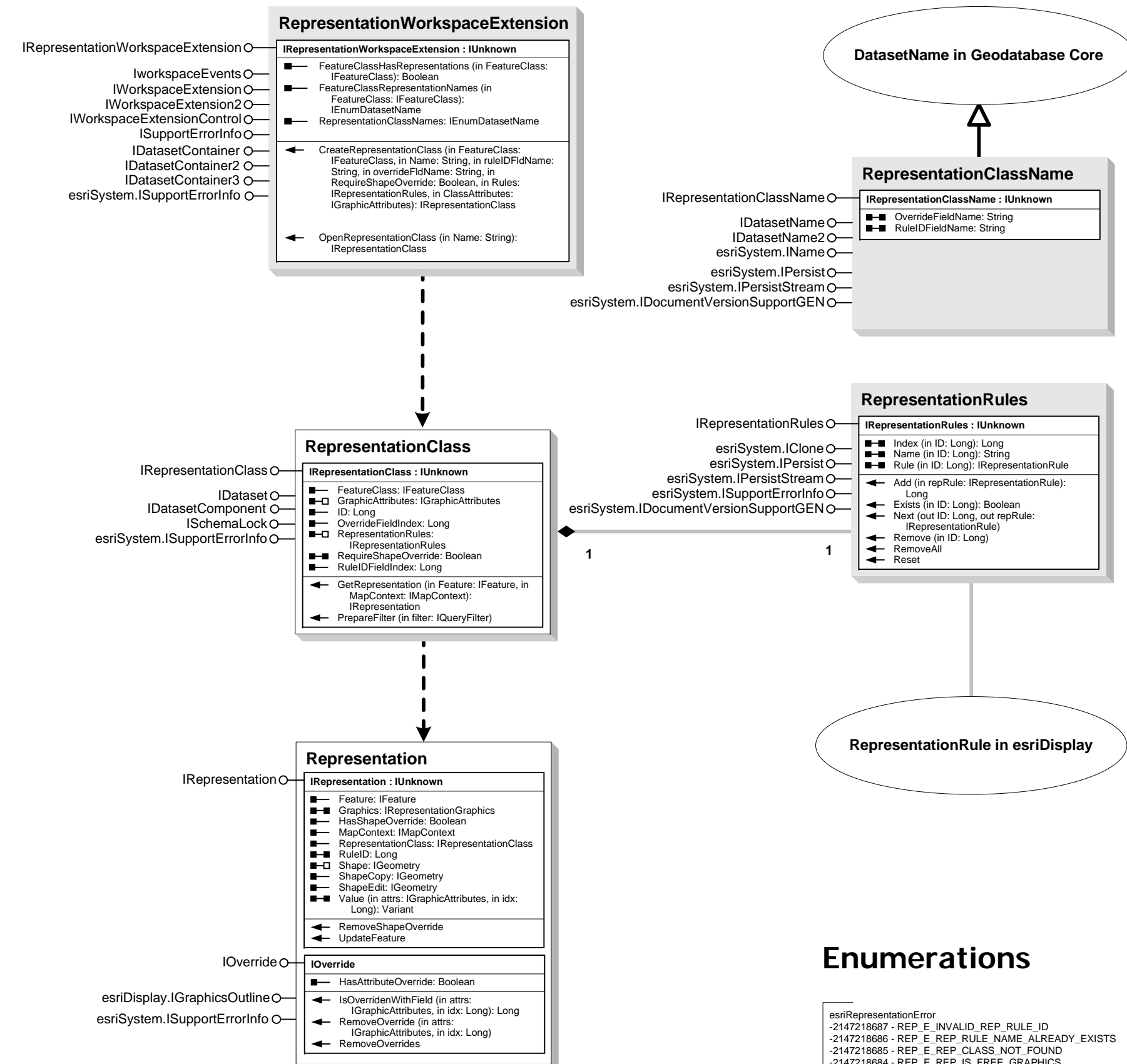
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# Geodatabase Object Model Representation Class

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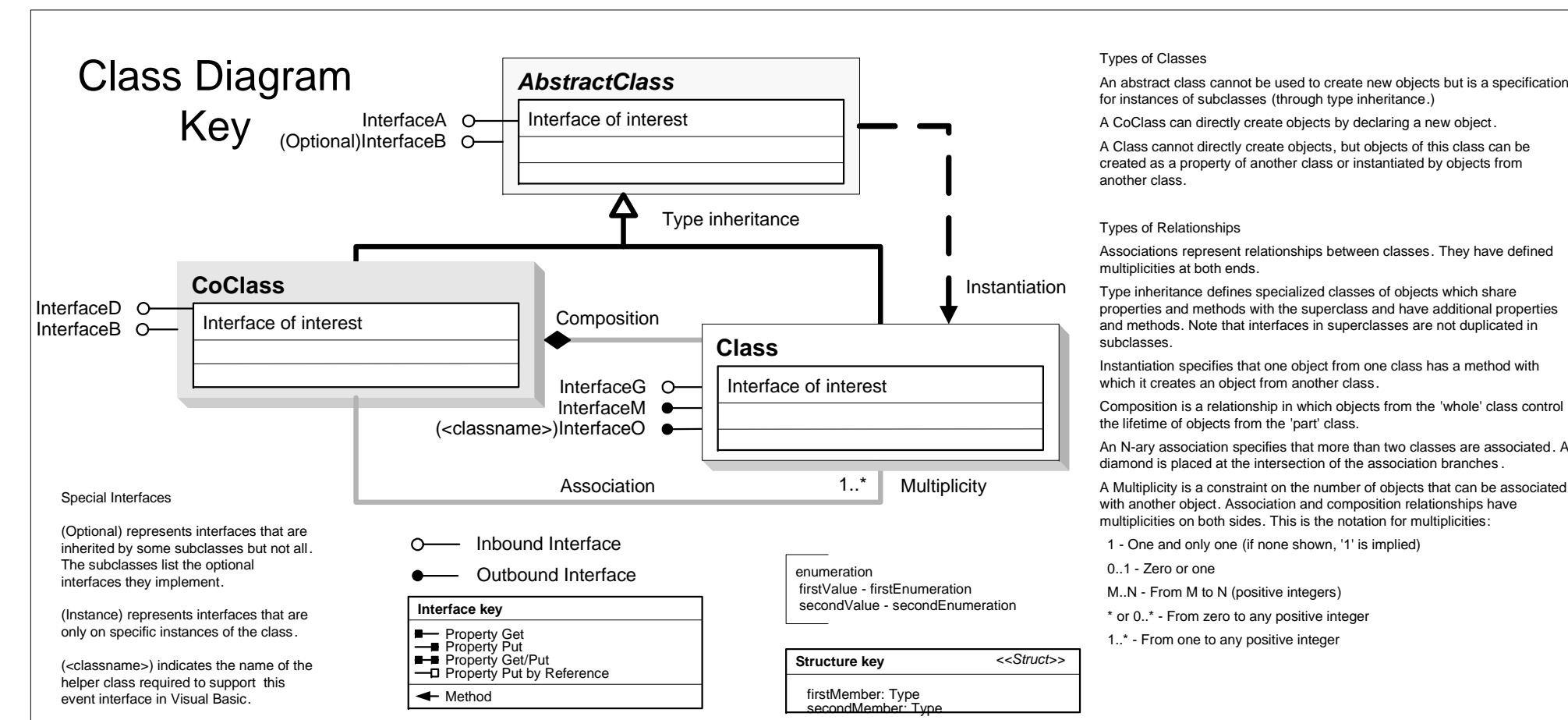
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## Enumerations

```

esriRepresentationError
-2147218687 - REP_E_INVALID_REP_RULE_ID
-2147218686 - REP_E_REP_RULE_NAME_ALREADY_EXISTS
-2147218685 - REP_E_REP_CLASS_NOT_FOUND
-2147218684 - REP_E_REP_IS_FREE_GRAPHICS
-2147218683 - REP_E_REP_USES_REP_RULE
-2147218682 - REP_E_CANT_ACQUIRE_SCHEMA_LOCK
-2147218681 - REP_E_OBJECT_IS_DELETED
-2147218680 - REP_E_NO_REP_RULES
-2147218679 - REP_E_WORKSPACE_DOESNT_SUPPORT_REP_EXTENSION
-2147218678 - REP_E_FEATURE_TYPE_NOT_SUPPORTED
-2147218677 - REP_E_GEODATABASE_DOESNT_SUPPORT_REPRESENTATIONS
-2147218676 - REP_E_NO_REP_SYSTEM_TABLES
-2147218675 - REP_E_REP_CLASS_NAME_ALREADY_EXISTS
-2147218674 - REP_E_FIELD_NAME_ALREADY_EXISTS
-2147218673 - REP_E_NAME_HAS_INVALID_CHARACTERS
-2147218672 - REP_E_MUST_BE_THE_OWNER
-2147218671 - REP_E_INVALID_LICENSE
-2147218670 - REP_E_COMPRESSED_FEATURE_CLASS
    
```



# Geodatabase Object Model

## Query Classes

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