SpatialAnalyst Object Model

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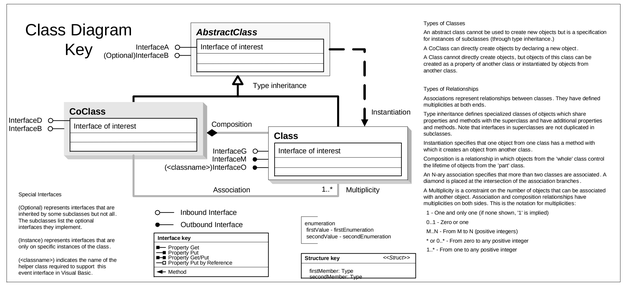


Types of Classes

An abstract class cannot be used to create new objects but is a specification for instances of subclasses (through type inheritance.)

A CoClass can 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 their parent classes and may 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 that exists 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 ends. This is the notation for multiplicities:

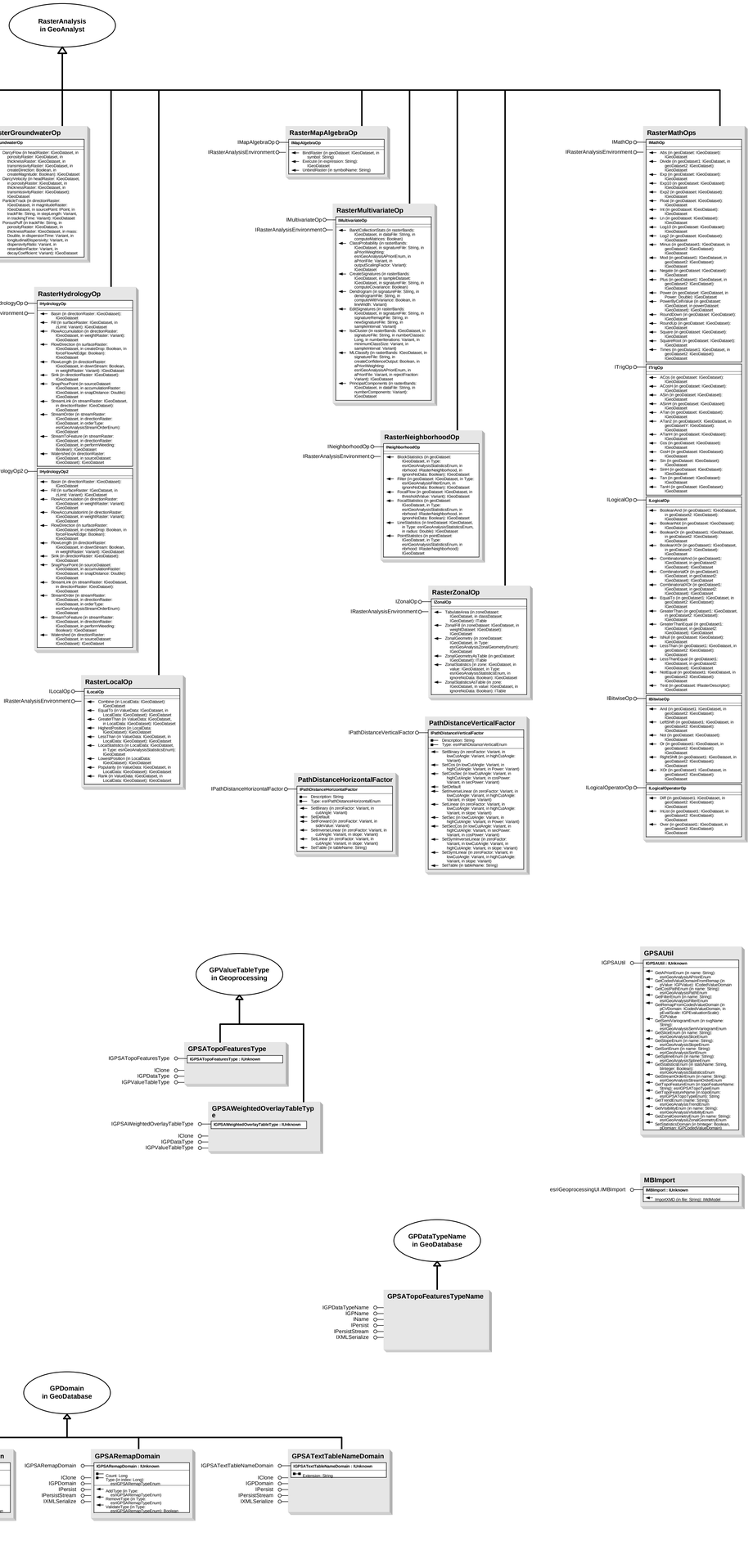
1 - One and only one (if none shown, '1' is implied)

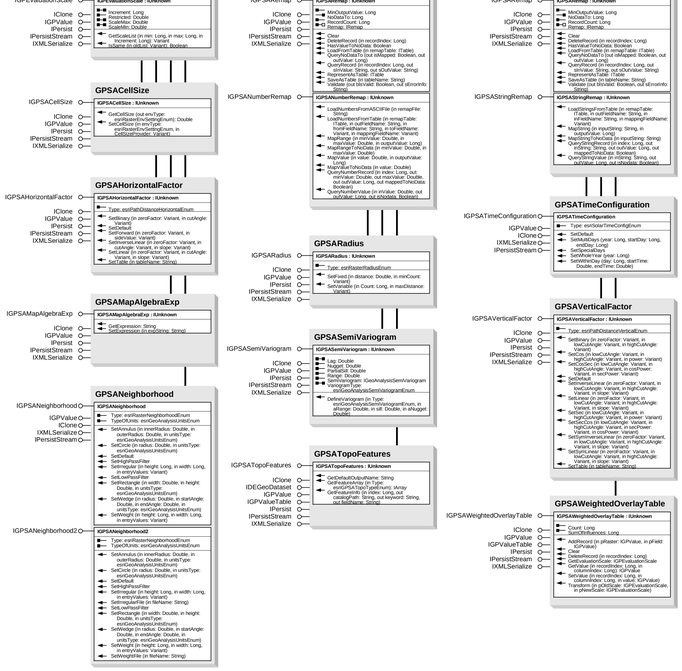
0..1 - Zero or one

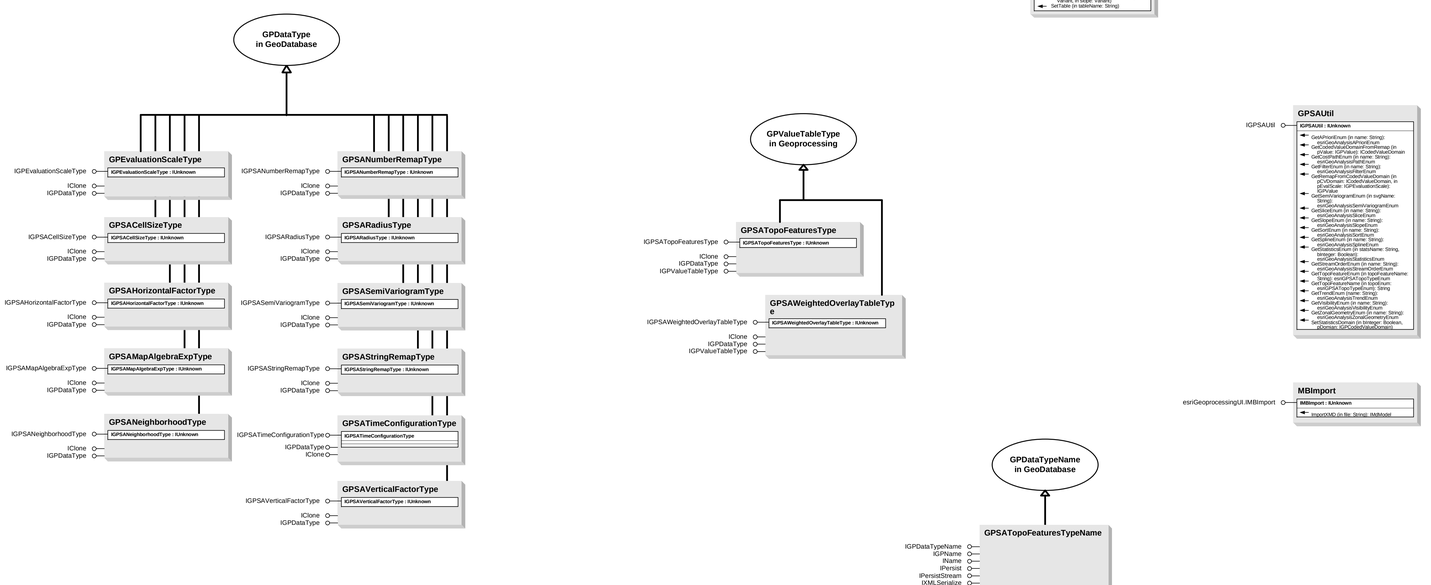
M..N - From M to N (positive integers)

* or 0..* - From zero to any positive integer

1..* - From one to any positive integer







Enumerations

esriGeoAnalysisAPIUnitEnum
1 - esriGeoAnalysisAPIMeterEqual
2 - esriGeoAnalysisAPIUnitSample
3 - esriGeoAnalysisAPIUnitFile

esriGeoAnalysisAreaUnitsEnum
1 - esriGeoAnalysisAreaSquareMapUnits
2 - esriGeoAnalysisAreaSquareMiles
3 - esriGeoAnalysisAreaSquareKilometers
4 - esriGeoAnalysisAreaAcres
5 - esriGeoAnalysisAreaHectares
6 - esriGeoAnalysisAreaSquareYards
7 - esriGeoAnalysisAreaSquareFeet
8 - esriGeoAnalysisAreaSquareInches
9 - esriGeoAnalysisAreaSquareMeters
10 - esriGeoAnalysisAreaSquareCentimeters
11 - esriGeoAnalysisAreaSquareMillimeters

esriGeoAnalysisPathEnum
1 - esriGeoAnalysisPathFirstEachCell
2 - esriGeoAnalysisPathFirstEachZone
3 - esriGeoAnalysisPathBestSingle

esriGeoAnalysisSortEnum
1 - esriGeoAnalysisSortNone
2 - esriGeoAnalysisSortDescending
3 - esriGeoAnalysisSortAscending

esriGeoAnalysisStreamOrderEnum
1 - esriGeoAnalysisStreamOrderStrahler
2 - esriGeoAnalysisStreamOrderShreve

esriGeoAnalysisZonalGeometryEnum
1 - esriGeoAnalysisZonalGeometryArea
2 - esriGeoAnalysisZonalGeometryPerimeter
3 - esriGeoAnalysisZonalGeometryThickness
4 - esriGeoAnalysisZonalGeometryCentroid

esriPathDistanceHorizontalEnum
0 - esriPathDistanceHorizontalInvalid
1 - esriPathDistanceHorizontalBinary
2 - esriPathDistanceHorizontalForward
3 - esriPathDistanceHorizontalLinear
4 - esriPathDistanceHorizontalInverseLinear
5 - esriPathDistanceHorizontalTable

esriPathDistanceVerticalEnum
0 - esriPathDistanceVerticalInvalid
1 - esriPathDistanceVerticalBinary
2 - esriPathDistanceVerticalLinear
3 - esriPathDistanceVerticalInverseLinear
4 - esriPathDistanceVerticalTable
5 - esriPathDistanceVerticalSymLinear
6 - esriPathDistanceVerticalInverseLinear
7 - esriPathDistanceVerticalCos
8 - esriPathDistanceVerticalSec
9 - esriPathDistanceVerticalCosSec
10 - esriPathDistanceVerticalSecCos

esriGPSANeighborhoodTypeEnum
1 - esriGPSANeighborhoodTypeFullContents
2 - esriGPSANeighborhoodTypeFocalEngine

esriGPSARemapTypeEnum
1 - esriGPSARemapNumber
2 - esriGPSARemapString
3 - esriGPSARemapRange

esriGPSATopoTypeEnum
1 - esriGPSATopoTypeFlowElevation
2 - esriGPSATopoTypeFlowVector
3 - esriGPSATopoSink
4 - esriGPSATopoStream
5 - esriGPSATopoBoundary
6 - esriGPSATopoLake

esriRasterRadiusEnum
1 - esriRasterRadiusFixed
2 - esriRasterRadiusVariable