Geoprocessing Object Model

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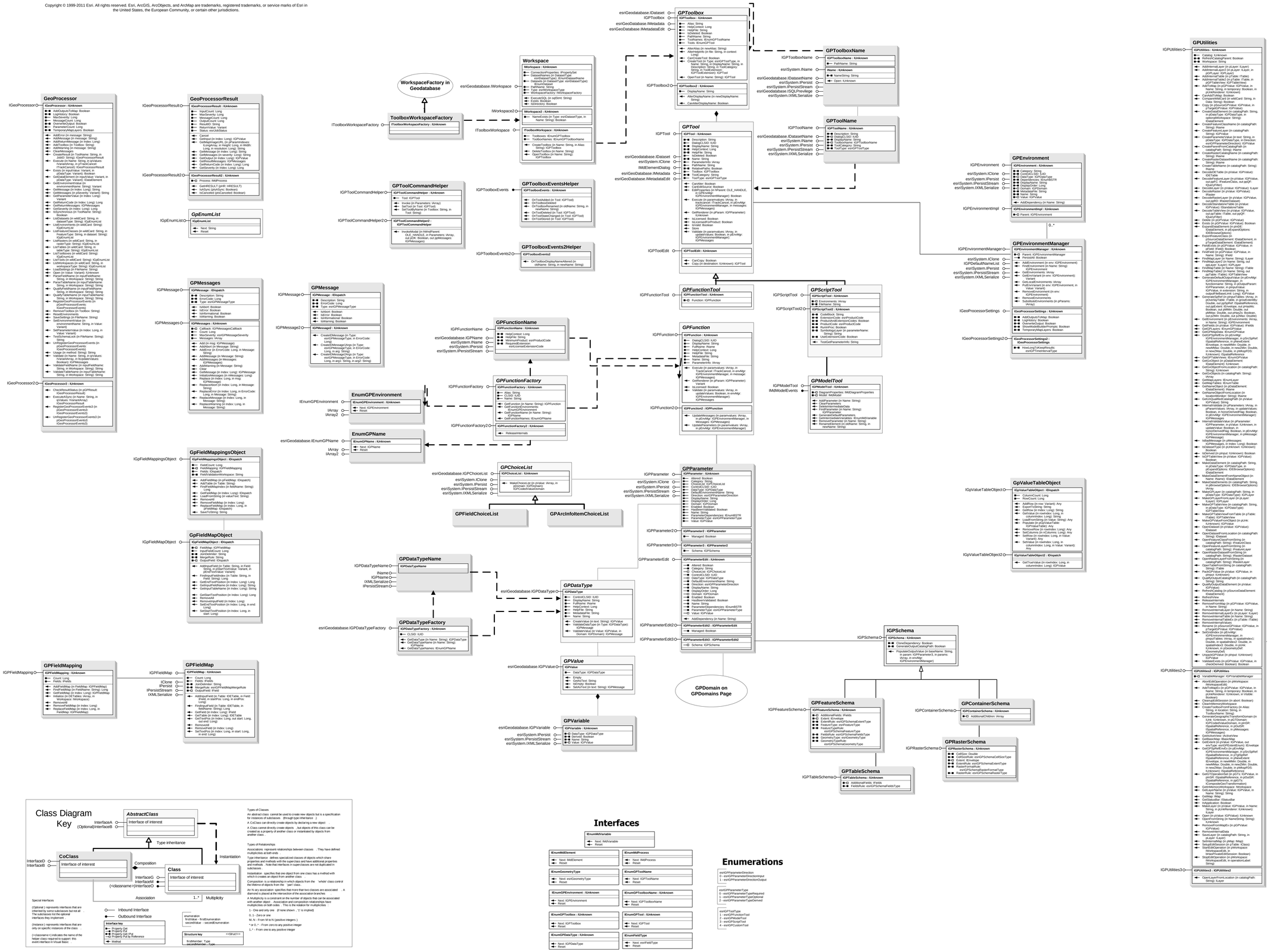

Class Diagram Key

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 .

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 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

Interfaces

Enumerations

esriGPParameterDirection
0 - esriGPParameterDirectionInput
1 - esriGPParameterDirectionOutput

esriGPParameterType
0 - esriGPParameterTypeRequired
1 - esriGPParameterTypeOptional
2 - esriGPParameterTypeDerived

esriGPToolType
1 - esriGPFunctionTool
2 - esriGPModelTool
3 - esriGPScriptTool
4 - esriGPCustomTool

Geoprocessing Object Model Value Objects

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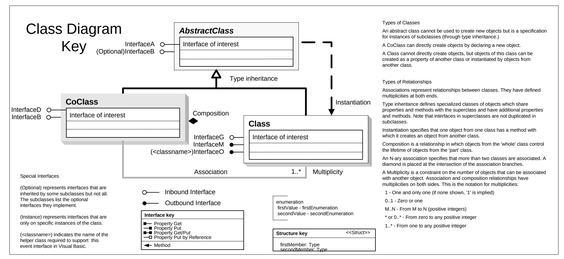
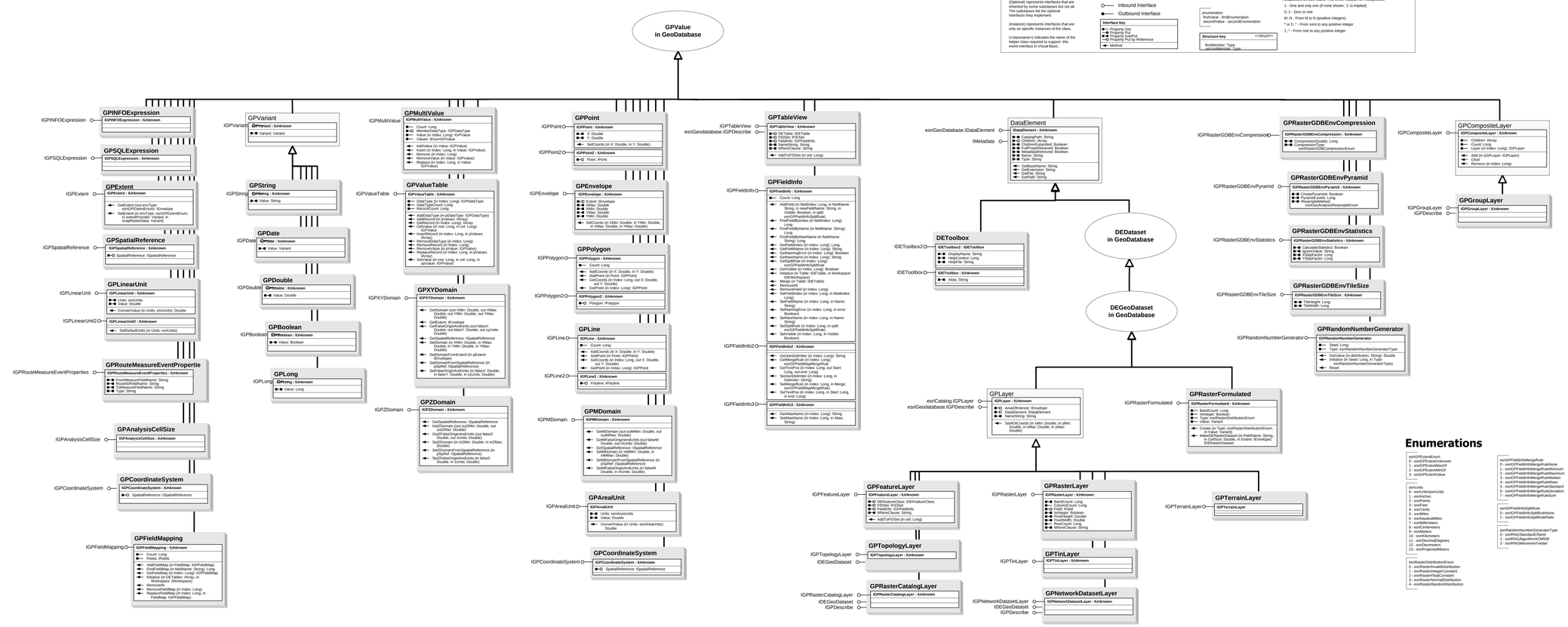




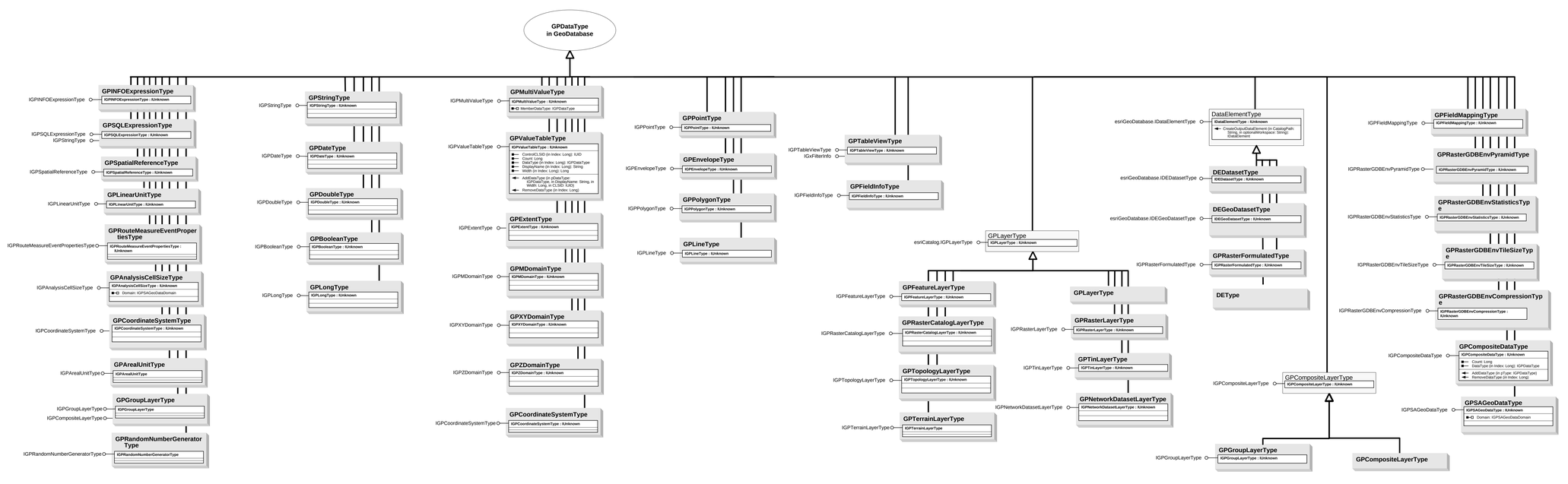
Enumerations

esriGPExtentEnum
0 - esriGPExtentUnknown
1 - esriGPExtentMaxOf
2 - esriGPExtentMinOf
3 - esriGPExtentValue

esriUnits
0 - esriUnknownUnits
1 - esriInches
2 - esriPoints
3 - esriFeet
4 - esriYards
5 - esriMiles
6 - esriNauticalMiles
7 - esriMillimeters
8 - esriCentimeters
9 - esriMeters
10 - esriKilometers
11 - esriDecimalDegrees
12 - esriDecimeters
13 - esriProjectedMeters

esriRasterDistributionEnum
0 - esriRasterUniformDistribution
1 - esriRasterIntegerConstant
2 - esriRasterRealConstant
3 - esriRasterNormalDistribution
4 - esriRasterRandomDistribution

esriGPFieldSplitMergeRule
0 - esriGPFieldSplitMergeRuleNone
1 - esriGPFieldSplitMergeRuleMinimum
2 - esriGPFieldSplitMergeRuleMaximum
3 - esriGPFieldSplitMergeRuleMajority
4 - esriGPFieldSplitMergeRuleMean
5 - esriGPFieldSplitMergeRuleStandard
6 - esriGPFieldSplitMergeRuleDeviation
7 - esriGPFieldSplitMergeRuleSum

esriGPFieldSplitRule
0 - esriGPFieldSplitRuleSplitNone
1 - esriGPFieldSplitRuleSplitRatio

esriRandomNumberGeneratorType
0 - esriRNGStandardCRand
1 - esriRNGAlgorithmACM599
2 - esriRNGMersenneTwister