



Geoprocessor Programming Model

ArcGIS 9.2

arcgisscripting / GpDispatch

Properties

- MaxSeverity
- MessageCount
- OverwriteOutput: Boolean
- ParameterCount
- Toolbox

Dynamic Methods and Properties

- Environment
- Tool (tool parameters)

SpatialReference

All Coordinate Systems

- Type
- Name
- Abbreviation
- Remarks
- FactoryCode
- HasMPrecision
- HasXYPrecision
- HasZPrecision
- FalseOriginAndUnits
- MFalseOriginAndUnits
- ZFalseOriginAndUnits
- Domain
- MDomain
- ZDomain
- IsHighPrecision
- XYTolerance
- MTolerance
- ZTolerance
- XYResolution
- MResolution
- ZResolution
- Usage
- CreateFromFile(prjFile)

Projected Coordinate System only

- CentralMeridian
- CentralMeridianInDegrees
- LongitudeOfOrigin
- LatitudeOf1st
- LatitudeOf2nd
- FalseEasting
- FalseNorthing
- CentralParallel
- StandardParallel1
- StandardParallel2
- LongitudeOf1st
- LongitudeOf2nd
- ScaleFactor
- Azimuth
- Classification
- PCSCode
- FSCCode
- ProjectionName
- ProjectionCode
- LinearUnitName
- LinearUnitCode

FieldMappings

- FieldValidationWorkspace(Workspace)
- FieldCount
- Fields: Object
- AddTable(inputTableName)
- AddFieldMap(FieldMap: Object)
- GetFieldMap(Index): FieldMap: Object
- ReplaceFieldMap(Index, FieldMap: Object)
- RemoveFieldMap(Index)
- FindFieldMapIndex(FieldName)
- RemoveAll()
- ExportToString()
- LoadFromString(inputString)

FieldMap

- MergeRule(String)
- JoinDelimiter(String)
- OutputField(Field: Object)
- InputFieldCount(Long)
- SetStartTextPosition(Index, Long)
- GetStartTextPosition(Index)
- SetEndTextPosition(Index, Long)
- GetEndTextPosition(Index)
- AddInputField(inputTableName, FieldName, StartTextPosition, EndTextPosition)
- FindInputFieldIndex(Table, FieldName)
- GetInputTableName(Index)
- GetInputFieldName(Index)
- RemoveInputField(Index)
- RemoveAll()

Field **

- Name
- AliasName
- Domain
- Editable: Boolean
- HasIndex: Boolean
- IsNull: Boolean
- IsUnique: Boolean
- Length
- Type
- Scale
- Precision

Array

- Count
- Reset
- Next: Object
- Add(Object)
- Insert(Index, Object)
- Remove(Index)
- RemoveAll()
- Replace(Index, Object)
- GetObject(Index): Object

Point

- ID
- X
- Y
- Z
- M

NetCDFFileProperties ***

- GetAttributeNames(VariableName): Array
- GetAttributeValue(VariableName, AttributeName)
- GetDimensionIndex(DimensionName, Value)
- GetDimensions: Array
- GetDimensionsByVariable(VariableName): Array
- GetDimensionSize(DimensionName)
- GetDimensionValue(DimensionName, Index)
- GetFieldType(Name)
- GetSpatialReference(VariableName, XDimension, YDimension): SpatialReference: Object
- GetVariables: Array
- GetVariablesByDimension(DimensionName): Array

FeatureSet

- Load (InputValue)
- Save (OutputValue)

RecordSet

- Load (InputValue)
- Save (OutputValue)

Result ***

- Status
- ResultID
- MessageCount
- MaxSeverity
- OutputCount
- GetMessages (severity)
- GetMessage (index)
- GetSeverity (index)
- GetInput (index): Object
- GetOutput(index): Object
- GetMapImageURL (ParameterList, Height, Weight, Resolution)
- Cancel ()

FieldInfo

- Count
- AddField(FieldName, NewName, Visible, SplitRule)
- ExportToString()
- FindFieldByName(FieldName)
- FindFieldByNewName(NewName)
- GetFieldName(Index)
- GetNewName(Index)
- GetSplitRule(Index)
- GetVisible(Index)
- LoadFromString(inputString)
- RemoveField(Index)
- SetFieldName(Index, FieldName)
- SetNewName(Index, NewName)
- SetSplitRule(Index, SplitRule)
- SetVisible(Index, Visible)

ValueTable ***

- RowCount
- ColumnCount
- AddRow(optional value)
- GetRow(rowIndex)
- GetValue(rowIndex, columnIndex)
- LoadFromString(value)
- ExportToString()
- RemoveRow(rowIndex)
- SetRow(rowIndex, value)
- SetColumns(value)
- SetValue(rowIndex, columnIndex)

* Use either a read-only or read-write Field object to set the property. The returned object is read-write.

** Create and populate a Field object to set the properties of the Output field within a FieldMap object.

*** When using CreateObject to create ValueTable, NetCDFFileProperties and Result objects, an extra argument is used.

CreateObject("ValueTable", columnCount)
CreateObject("NetCDFFileProperties, NetCDFFile")
CreateObject("Result", toolName + "*" + ResultID)

Fields

- Next: Object
- Reset

Indexes

- Next: Object
- Reset

Enumeration (featureclasses, rasters, tables, datasets, workspaces, environments, toolboxes, tools)

- Next: (String)
- Reset

Field

- Name
- AliasName
- Domain
- Editable: Boolean
- HasIndex: Boolean
- IsNull: Boolean
- IsUnique: Boolean
- Length
- Type
- Scale
- Precision

Index

- Name
- IsAscending: Boolean
- IsUnique: Boolean
- Fields: Object

Rows (SearchCursor, InsertCursor, UpdateCursor)

- SearchCursor
 - Next: Object
 - Reset
- InsertCursor
 - Reset
 - NewRow: Object
 - InsertRow(Object)
- UpdateCursor
 - Next: Object
 - Reset
 - UpdateRow(Object)
 - DeleteRow(Object)

Row

- FieldName
- GetValue(fieldName)

Row

- FieldName
- GetValue(fieldName)
- SetValue(fieldName, Value)

Geometry

- Type
- Extent
- Centroid
- TrueCentroid
- LabelPoint
- FirstPoint
- LastPoint
- Area
- Length
- IsMultipart: Boolean
- PartCount
- HullRectangle
- GetPart (Index): Object

FeatureClass Properties

- FeatureType
- HasM: Boolean
- HasZ: Boolean
- HasSpatialIndex: Boolean
- RelationshipClassNames
- ShapeFieldName
- ShapeType
- TopologyName

Table Properties

- HasOID: Boolean
- OIDFieldName
- Fields: Object
- Indexes: Object

Relationship Class Properties

- IsVersioned: Boolean
- Fields: Object

Table Properties

Dataset Properties

- DatasetType
- Extent
- SpatialReference: Object

Raster Catalog Properties

- RasterFieldName

Dataset Properties

Table Properties

Coverage FeatureClass Properties

- FeatureClassType
- HasFAT: Boolean
- HasTopology: Boolean

Table Properties

Dataset Properties

Table View Properties

- Table
- FIDSet
- WhereClause
- FieldInfo: Object
- NameString

Table Properties

Workspace Properties

- Connection Properties
- ConnectionString
- WhereClause
- WorkspaceFactoryProgID
- WorkspaceType

Table Properties

Raster Dataset Properties

- BandCount
- CompressionType
- Format
- Permanent: Boolean
- SensorType

Raster Band Properties

- Height
- IsInteger: Boolean
- MeanCellHeight
- MeanCellWidth
- NoDataValue
- PixelType
- PrimaryField
- TableType
- Width

Raster Band Properties

Describe Object Properties

- DataType
- CatalogPath

Table Properties

Dataset Properties

- Tolerances

Table Properties

Dataset Properties

Any tool from a referenced toolbox may be called as a method, while environment settings are properties.

A Field returned from a Fields object is almost equivalent to a Field object that can be created using the CreateObject method. The only difference is their read/write capabilities.

An Index Object can create a Fields object for that index.

Use List functions to create an enumeration object of the data type.

Each row will dynamically support the field name as a property.

Using the Geometry field, a geometry object may be created. It is used to describe the properties of the geometry for each row in a feature class.

An Object is created with all of the properties of the data being described. The specific properties listed apply to all types of data.

Red text indicates a property set.

Each type of data has unique properties. Depending on their relationship, properties of other data types may also be available.

All properties and method parameters are either a string or a long data type, unless otherwise stated. Some properties and parameters may be objects or Boolean values.

The different colors in this model help you connect the various methods and properties with the appropriate objects.

Object key

- Property Get
- Property Get/Put
- Method

Additional information about this model is available in the Using the geoprocessor section of the ArcGIS Desktop 9.2 Help at: Geoprocessing > Automating your work with scripts > Getting started with writing geoprocessing scripts > Using the geoprocessor.