

Geoprocessor Programming Model

ArcGIS 9.0

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GpDispatch p. 26

Properties

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

Methods:

- AddError (in message)
- AddMessage (in message)
- AddReturnMessage (in Index)
- AddToolbox (in Toolbox)
- AddWarning (in message)
- Command (in CommandLine)
- CopyParameter (in fromIndex, in toIndex)
- CheckProduct(ProductCode)
- ProductInfo(ProductCode)
- SetProduct(ProductCode)
- CheckExtension(ExtensionCode)
- CheckOutExtension(ExtensionCode)
- CheckInExtension(ExtensionCode)
- CreateObject (ObjectName, ExtraArg): Object
- Describe (InputValue): Object
- Exists (InputValue): Boolean
- GetMessage (Index)
- GetMessages (severity)
- GetParameter (Index): Object
- GetParameterAsText (Index)
- GetSeverity (Index)
- GetReturnCode (Index)
- GetSystemEnvironment (envName)
- ListFields (InputValue, wildCard, fieldType): Object
- ListIndexes (InputValue, wildCard): Object
- ListRasters (wildCard, rasterType): Object
- ListTables (wildCard, tableType): Object
- ListWorkspaces (wildCard, workspaceType): Object
- ListDatasets (wildCard, featureType): Object
- ListFeatureClasses (wildCard, featureType): Object
- ListEnvironments (wildCard): Object
- ListToolboxes (wildCard): Object
- ListTools (wildCard): Object
- ParseFieldName (inputFieldName, Workspace)
- ParseTableName (inputTableName, Workspace)
- QualifyFieldName (inputFieldName, Workspace)
- QualifyTableName (inputTableName, Workspace)
- RefreshCatalog (InputValue)
- RemoveToolbox (Toolbox)
- SetParameter (Index, Object)
- SetParameterAsText (Index, argument)
- InsertCursor (InputValue, SpatialReference): Object
- SearchCursor (InputValue, WhereClause, SpatialReference): Object
- UpdateCursor (InputValue, WhereClause, SpatialReference): Object
- TestSchemaLock(inputValue): Boolean
- Usage (method)
- ValidateFieldName (inputFieldName, Workspace)
- ValidateTableName (inputTableName, Workspace)

Dynamic Methods and Properties p. 28

- Environment
- Tool (tool parameters) MaxSeverity

Use CreateObject to create a Spatial Reference, a Value Table, or a FieldInfo Object

SpatialReference p. 63

- Type
- Name
- Abbreviation
- Remarks
- FactoryCode
- HasMPrecision
- HasXYPrecision
- HasZPrecision
- FalseOriginAndUnits
- MFalseOriginAndUnits
- ZFalseOriginAndUnits
- Domain
- MDomain
- ZDomain
- Usage
- CentralMeridian*
- CentralMeridianInDegrees*
- LongitudeOfOrigin*
- LatitudeOf1st*
- LatitudeOf2nd*
- FalseEasting*
- FalseNorthing*
- CentralParallel*
- StandardParallel1*
- StandardParallel2*
- LongitudeOf1st*
- LongitudeOf2nd*
- ScaleFactor*
- Azimuth*
- Classification*
- SemiMajorAxis**
- SemiMinorAxis**
- Flattening**
- Longitude**
- RadiansPerUnit**

* Projected Coordinate system only
** Geographic Coordinate system only

ValueTable p. 46

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

FieldInfo

- Count
- AddField(FieldName, NewName, Hidden: Boolean, Ratio)
- GetField (index)
- DeleteField (index)

Array p. 71

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

Point p. 72

- ID
- X
- Y
- Z
- M

Fields

- Next: Object
- Reset

Field p. 62

- Name
- AliasName
- Domain
- IsEditable: Boolean
- HasIndex: Boolean
- IsNullabe: Boolean
- IsUnique: Boolean
- Length
- Type
- Scale
- Precision

Indexes

- Next: Object
- Reset

Index p. 62

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

Enumeration (featureclasses, rasters, tables, datasets, workspaces) p. 43

- Next: (String)
- Reset

Rows (SearchCursor, InsertCursor, UpdateCursor) p. 68

SearchCursor

- Next: Object
- Reset

InsertCursor

- Next: Object
- 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 p. 70

- Type
- Extent
- Centroid
- FirstPoint
- LastPoint
- Area
- Length
- IsMultipart
- PartCount
- GetPart (Index)

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

Raster Catalog Properties

- RasterFieldName

Dataset Properties

- DatasetType
- Extent
- SpatialReference: Object

Raster Dataset Properties

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

Raster Band Properties

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

Coverage FeatureClass Properties

- FeatureClassType
- HasFAT: Boolean
- HasTopology: Boolean

TableView Properties

- Table
- FIDSet
- FieldInfo
- WhereClause
- NameString

Workspace Properties

- Connection Properties
- ConnectionString
- Domains
- WorkspaceFactoryProgID
- WorkspaceType

Coverage Properties

- Tolerances

Describe Object Properties p. 60

- DataType
- CatalogPath

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. See page 65 for more information on property sets.

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

An Index Object can create a fields object for that index

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

Cursors return a Rows object with properties for each type of cursor

Each row will support dynamically 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.

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.

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

Object key

- Property Get
- Property Get/Put
- Method