

Geometry: Group

Geometry

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Functions

afx_msg VARIANT	OSGeometryUI::CreateGroup (const VARIANT FAR &groupType, const VARIANT FAR &bstrGroup) Creates a group with specified name for the specified type for selected entities.
afx_msg VARIANT	OSGeometryUI::GetGroupCountAll () Returns the number of all group types in the current model.
afx_msg VARIANT	OSGeometryUI::GetGroupCount (const VARIANT FAR &varGroupType) Returns the number of group with specified type in the current model.
afx_msg VARIANT	OSGeometryUI::GetGroupNames (const VARIANT FAR &varGroupType, VARIANT FAR &szGroupNameList) Returns the list of string name of group(s) with specified group type in current model.
afx_msg VARIANT	OSGeometryUI::GetGroupEntityCount (const VARIANT FAR &szGroupName) Returns the total number of entities in certain group.
afx_msg VARIANT	OSGeometryUI::GetGroupEntities (const VARIANT FAR &szGroupName, VARIANT FAR &varEntityList) A function to obtain the all entities in a certain group.
afx_msg VARIANT	OSGeometryUI::CreateGroupEx (const VARIANT FAR &varGroupType, const VARIANT FAR &szGroupName, const VARIANT FAR &varEntityCount, const VARIANT FAR &varEntityList) Creates a group with specified name for the specified type for selected entities.
afx_msg VARIANT	OSGeometryUI::DeleteGroup (const VARIANT FAR &szGroupName) Deletes a group specified by group string name.
afx_msg VARIANT	OSGeometryUI::UpdateGroup (const VARIANT FAR &szGroupName, const VARIANT FAR &varFlag, const VARIANT FAR &varEntity, VARIANT FAR &varEntityList) Updates (replaces, removes, adds) entities to a specified group.

Detailed Description

These functions are related to operations of creating, adding, getting and deleting group(s).

Function Documentation

◆ CreateGroup()

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VARIANT OSGeometryUI::CreateGroup (const VARIANT FAR & **groupType**,
const VARIANT FAR & **bstrGroup**)

private

Creates a group with specified name for the specified type for selected entities.

Parameters

[in] **groupType** Type of entities in group:

Index	Group Type
1	Nodes
2	Members
3	Plates
4	Solids
5	Geometry (Members, Plates and Solids)
6	Floor (Floor beam)

[in] **bstrGroup** (LPCTSTR) String name of the group.

Return values

- 0** OK.
- 1** General error.
- 100** Invalid Argument.
- 110** No beam / plate / solid has been selected.
- 2005** No node has been selected.
- 3005** No member has been selected.
- 4005** No plate has been selected.
- 5005** No solid has been selected.
- 7001** Group already exists.

C++ Syntax

```
// Create a new node group named "NodeGroup" for selected nodes.
VARIANT RetVal = OSGeometryUI::CreateGroup(1, (LPCTSTR)"NodeGroup");
```

VBA Syntax

```
' Create a new node group named "NodeGroup" for selected nodes.
Dim RetVal As VARIANT = OSGeometryUI.CreateGroup(1, "NodeGroup")
```

See also

[OSGeometryUI::GetGroupCount](#)

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OSGeometryUI::DeleteGroup◆ **CreateGroupEx()**

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```
VARIANT OSGeometryUI::CreateGroupEx ( const VARIANT FAR & varGroupType,
                                     const VARIANT FAR & szGroupName,
                                     const VARIANT FAR & varEntityCount,
                                     const VARIANT FAR & varEntityList )
```

private

Creates a group with specified name for the specified type for selected entities.

Parameters

[in] **varGroupType** Type of entities in group:

Index	Group Type
1	Nodes
2	Members
3	Plates
4	Solids
5	Geometry (Members, Plates and Solids)
6	Floor (Floor beam)

[in] **szGroupName** (LPCTSTR) String name of the group.

Return values

- 0** OK.
- 1** General error.
- 100** Invalid Argument.
- 110** No beam / plate / solid has been selected.
- 2005** No node has been selected.
- 3005** No member has been selected.
- 4005** No plate has been selected.
- 5005** No solid has been selected.
- 7001** Group already exists.

Parameters

[in] **varEntityCount** Entity count VARIANT array.

[out] **varEntityList** Entity number ID(s) VARIANT array.

C++ Syntax

```
// Create a new node group named "NodeGroup" for selected nodes.
VARIANT RetVal = OSGeometryUI::CreateGroup(1, (LPCTSTR)"NodeGroup", 4, &varEntityList);
```

```
' Create a new node group named "NodeGroup" for selected nodes.
Dim RetVal As VARIANT = OSGeometryUI.CreateGroup(1, "NodeGroup", 4, &varEntityList)
```

See also[OSGeometryUI::CreateGroup](#)[OSGeometryUI::GetGroupCount](#)[OSGeometryUI::GetGroupNames](#)[OSGeometryUI::DeleteGroup](#)◆ **DeleteGroup()**

VARIANT OSGeometryUI::DeleteGroup (const VARIANT FAR & **szGroupName**)

private

Deletes a group specified by group string name.

Parameters

[in] **szGroupName** (LPCTSTR) Group string name.

Return values

0 OK.

-1 General error.

C++ Syntax

```
// Delete the "NodeGroup" group.
VARIANT RetVal = OSGeometryUI::DeleteGroup((LPCTSTR)"NodeGroup");
```

VBA Syntax

```
' Delete the "NodeGroup" group.
Dim RetVal As VARIANT = OSGeometryUI.DeleteGroup("NodeGroup")
```

See also[OSGeometryUI::CreateGroup](#)◆ **GetGroupCount()**

VARIANT OSGeometryUI::GetGroupCount (const VARIANT FAR & varGroupType)

private

Returns the number of group with specified type in the current model.

Parameters

[in] **varGroupType** Type of entities in group:

Index	Group Type
1	Nodes
2	Members
3	Plates
4	Solids
5	Geometry (Members, Plates and Solids)
6	Floor (Floor beam)

Returns

The total number of group(s).

C++ Syntax

```
// Count for the group(s) of node type.
VARIANT nNodeGroup = OSGeometryUI::GetGroupCount(1);
```

VBA Syntax

```
' Count for the group(s) of node type.
Dim nNodeGroup As VARIANT = OSGeometryUI.GetGroupCount(1)
```

See also

[OSGeometryUI::CreateGroup](#)

[OSGeometryUI::GetGroupNames](#)

◆ GetGroupCountAll()

VARIANT OSGeometryUI::GetGroupCountAll ()

private

Returns the number of all group types in the current model.

Type of entities in group:

Index	Group Type
1	Nodes
2	Members
3	Plates
4	Solids
5	Geometry (Members, Plates and Solids)
6	Floor (Floor beam)

Returns

The total number of group(s).

C++ Syntax

```
// Count for the group(s) of all types.
VARIANT nAllGroup = OSGeometryUI::GetGroupCountAll();
```

VBA Syntax

```
' Count for the group(s) of all types.
Dim nAllGroup As VARIANT = OSGeometryUI.GetGroupCountAll()
```

See also

[OSGeometryUI::CreateGroup](#)

[OSGeometryUI::GetGroupNames](#)

[OSGeometryUI::GetGroupCount](#)

◆ **GetGroupEntities()**

VARIANT OSGeometryUI::GetGroupEntities (const VARIANT FAR & szGroupName,
 VARIANT FAR & varEntityList)

private

A function to obtain the all entities in a certain group.

Parameters

- [in] **szGroupName** (LPCTSTR) Group string name.
- [out] **varEntityList** Entity number ID(s) VARIANT array.

Returns

The total number of entities in specified group.

Return values

- 1 General error.
- 107 Array of integer expected.

C++ Syntax

```
// Get entity IDs.
VARIANT RetVal = OSGeometryUI::GetGroupEntities((LPCTSTR)"NodeGroup", &varEntityList);
```

VBA Syntax

```
' Get entity IDs.
Dim RetVal As VARIANT = OSGeometryUI.GetGroupEntities("NodeGroup", &varEntityList)
```

See also

[OSGeometryUI::GetGroupEntityCount](#)

[OSGeometryUI::UpdateGroup](#)

◆ GetGroupEntityCount()

VARIANT OSGeometryUI::GetGroupEntityCount (const VARIANT FAR & szGroupName)

private

Returns the total number of entities in certain group.

Parameters

[in] **szGroupName** (LPCTSTR) Group string name.

Returns

The total number of entities in specified group.

C++ Syntax

```
// Count for the entities in "NodeGroup" group.  
VARIANT GroupEntityCount = OSGeometryUI::GetGroupEntityCount((LPCTSTR)"NodeGroup");
```

VBA Syntax

```
' Count for the entities in "NodeGroup" group.  
Dim GroupEntityCount As VARIANT = OSGeometryUI.GetGroupEntityCount("NodeGroup")
```

See also

[OSGeometryUI::GetGroupEntities](#)

◆ GetGroupNames()

VARIANT OSGeometryUI::GetGroupNames (const VARIANT FAR & **varGroupType**,
 VARIANT FAR & **szGroupNameList**)

private

Returns the list of string name of group(s) with specified group type in current model.

Parameters

[in] **varGroupType** Type of entities in group:

Index	Group Type
1	Nodes
2	Members
3	Plates
4	Solids
5	Geometry (Members, Plates and Solids)
6	Floor (Floor beam)

[out] **szGroupNameList** Group string name VARIANT array.

Return values

0 OK.

-107 Array of string expected.

C++ Syntax

```
// Get the list of name of groups of node type.
VARIANT RetVal = OSGeometryUI::GetGroupNames(1, &szGroupNameList)
```

VBA Syntax

```
' Get the list of name of groups of node type.
Dim RetVal As VARIANT = OSGeometryUI.GetGroupNames(1, &szGroupNameList)
```

See also

[OSGeometryUI::CreateGroup](#)

[OSGeometryUI::GetGroupCount](#)

◆ UpdateGroup()

```
VARIANT OSGeometryUI::UpdateGroup ( const VARIANT FAR & szGroupName,
                                     const VARIANT FAR & varFlag,
                                     const VARIANT FAR & varEntityCount,
                                     VARIANT FAR &      varEntityList )
```

private

Updates (replaces, removes, adds) entities to a specified group.

Parameters

- [in] **szGroupName** (LPCTSTR) Group string name.
- [in] **varFlag** Option for operation: 0 = replace the group entities with a array of entities;
1 = remove entities from this group;
2 = add entities to this group.
- [in] **varEntityCount** Entity count VARIANT array.
- [out] **varEntityList** Entity number ID(s) VARIANT array.

Return values

- 0 OK.
- 1 General error.
- 107 Array of integer expected.

C++ Syntax

```
// Add entities into "NodeGroup" group.
VARIANT RetVal = OSGeometryUI::UpdateGroup((LPCTSTR)"NodeGroup", 2, 4, &varEntityList);
```

VBA Syntax

```
' Add entities into "NodeGroup" group.
Dim RetVal As VARIANT = OSGeometryUI.UpdateGroup("NodeGroup", 2, 4, &varEntityList)
```

See also

[OSGeometryUI::CreateGroup](#)

[OSGeometryUI::GetGroupEntities](#)

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