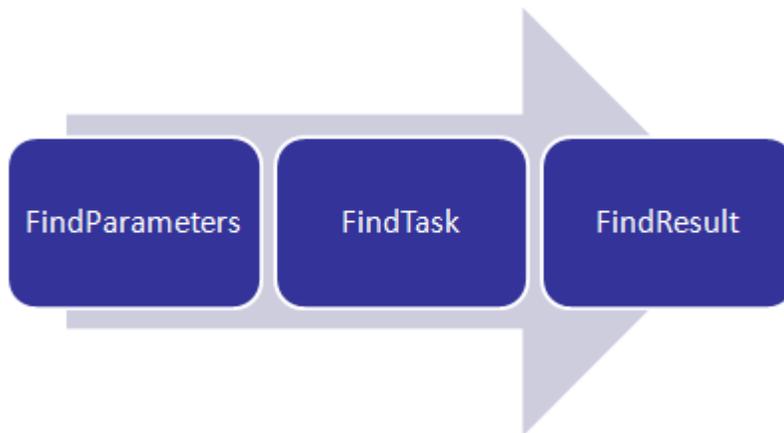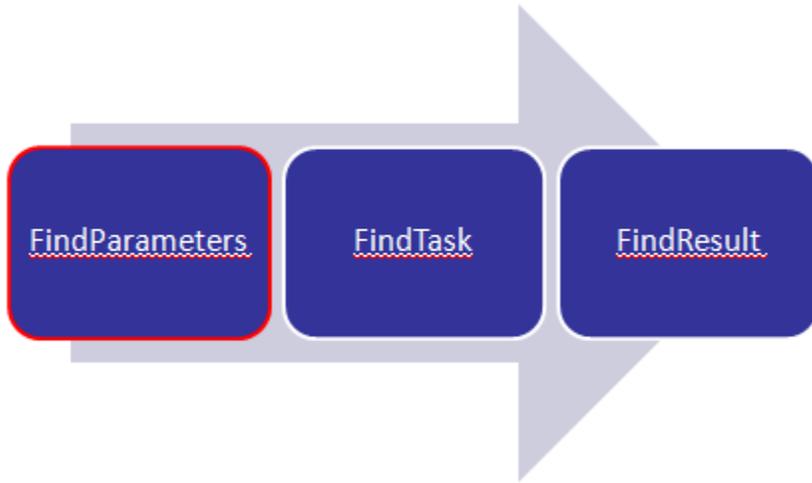# Chapter 14: Finding Features

Tasks that you can execute with the ArcGIS Server API for JavaScript are some of the most commonly used functions in ArcGIS Desktop, and the Find features task is a commonly used function in ArcGIS Desktop. Just as in the desktop version of ArcGIS, this task can be used to find features in a layer that match a string value. Before executing a find operation with a FindTask object you will need to set various parameters of the operation in an instance of FindParameters.

FindParameters gives you the ability to set various options including the search text, fields to search and others. Using the FindParameters object, FindTask then executes its tasks against one or more layers and fields and returns a FindResult object that contains the layerID, layerName, and feature that matched the search string.
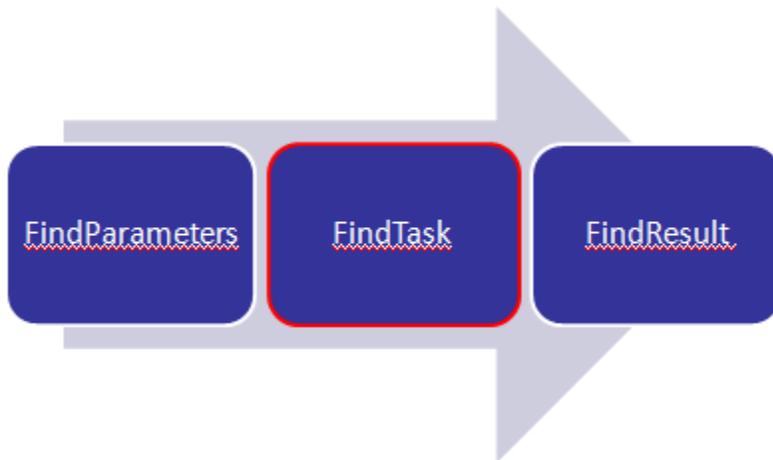

FindParameters is used to specify the search criteria for a find operation and includes a searchText property that includes the text that will be searched for along with properties that specify the fields and layers that will be searched. In addition, setting the returnGeometry property to true indicates that you want to return the geometry of the features that matched the find operation, and can be used to highlight the results.

```
var findParams;

//create find parameters and define known values
findParams = new esri.tasks.FindParameters();
findParams.returnGeometry = true;
findParams.layerIds = [0,1,2];
findParams.searchFields = ["CITY_NAME","NAME","SYSTEM","STATE_ABBR","STATE_NAME"];
findParams.searchText = searchText;
```

FindTask executes a find operation against the layers and fields specified in FindParameters and returns a FindResult object that contains the objects that were found. Just as with QueryTask and IdentifyTask, you must specify a URL pointer to the map service that will be used in the find operation, but notice that you do not need to include an integer value specifying the exact data layer to use. This is not necessary because the layers and fields to be used in the find operation were defined in the FindParameters object. A callback function is used to process the results stored in an instance of FindResult.

```
var findTask, findParams, map;

function init() {
    map = new esri.Map("map");
    var censusMapLayer = new esri.layers.ArcGISDynamicMapServiceLayer(
        "http://sampleserver1.arcgisonline.com/ArcGIS/rest/services/Specialty/ESRI_StatesCitiesRivers_USA/MapServer", {id:"usa"});
    map.addLayer(censusMapLayer);

    //create find task with url to map service
    findTask = new esri.tasks.FindTask("http://sampleserver1.arcgisonline.com/ArcGIS/rest/services/Specialty/ESRI_StatesCitiesRivers_USA/MapServer");

    //create find parameters and define known values
    findParams = new esri.tasks.FindParameters();
    findParams.returnGeometry = true;
    findParams.layerIds = [0,1,2];
    findParams.searchFields = ["CITY_NAME","NAME","SYSTEM","STATE_ABBR","STATE_NAME"];
}

function execute(searchText) {
    //set the search text to find parameters
    findParams.searchText = searchText;
    findTask.execute(findParams,showResults);
}
```

FindResults contains the results of a FindTask operation and contains features that can be represented as graphics, layer ids and names where the feature was found, and the field name containing the search string.