

```

private void btnDistance_Click(object sender, EventArgs e)
{
    strToolName = "ReturnDistance";
}

private void axMapControl1_OnMouseDown(object sender,
IMapControlEvents2_OnMouseDownEvent e)
{
    if (strToolName == "" || e.button != 1 || axMapControl1.LayerCount <= 0) return;

    //获取当前地图并清空
    IActiveView pActiveView = axMapControl1.ActiveView;
    IMap pMap = axMapControl1.Map;
    pMap.ClearSelection();

    //设置目标图层的(这里假设是第一个图层)
    IFeatureLayer pFeatureLayer = (IFeatureLayer)axMapControl1.get_Layer(0);

    //点选
    IPoint pPoint = pActiveView.ScreenDisplay.DisplayTransformation.ToMapPoint(e.x, e.y);
    ISpatialFilter pSpatialFilter = new SpatialFilterClass();
    pSpatialFilter.Geometry = pPoint;
    pSpatialFilter.SpatialRel = esriSpatialRelEnum.esriSpatialRelIntersects;
    IFeatureCursor pFeatureCursor = pFeatureLayer.Search(pSpatialFilter, false);
    IFeature pFeature = pFeatureCursor.NextFeature();
    if (pFeature != null)
    {
        IGeometry pGeometry = pFeature.Shape;
        IProximityOperator pProximityOperator = pGeometry as IProximityOperator;
        if (strToolName == "ReturnDistance")//鼠标在地图上单击前先单击了"最短距离"按钮
        {
            //返回图层全部要素
            IFeatureCursor compareCursor = pFeatureLayer.Search(null, false);
            IFeature compareFeature = compareCursor.NextFeature();//获得各多边形要素
            while (compareFeature != null)
            {
                IGeometry compareGeometry = compareFeature.Shape;
                axMapControl1.FlashShape(compareGeometry);//闪烁显示多边形要素

                // 获取字段索引
                int nameFieldIndex = pFeature.Fields.FindField("NAME");
            }
        }
    }
}

```

```

        //计算比较要素与选中要素的距离
        double distance = pProximityOperator.ReturnDistance(compareGeometry);//获得多边形
要素到鼠标点击处的最短距离
        MessageBox.Show(pFeature.get_Value(nameFieldIndex ) + "与" + compareFeature.get_
Value(nameFieldIndex ) + "的最短距离是" + distance.ToString() + "米");//弹出消息框显示多边形要素到
鼠标单击处的距离
        compareFeature = compareCursor.NextFeature();
    }
}
}
pActiveView.Refresh();    //刷新地图
}

```