Introduction to GIS with ArcGIS Pro

Adding Text to a Map:
Creating and Modifying Labels

Session 11

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Lecture Outline

- Introduction & Recap (5 minutes)
- Creating and Modifying Labels (45 minutes)
- Guided Exercise & Q&A (10 minutes)

Week 5: Controlling Feature Display and Selection

- **Class 9:** Selecting Features with Queries
- **Class 10:** Managing Feature Visibility
- **Milestone:** Assignment 1 (Data Creation and Mapping) will be assigned.

Week 6: Adding Text to a Map

- **Class 11:** Creating and Modifying Labels
- **Class 12:** Using Label Classes

Week 7: Working with Tabular Data

- **Class 13:** Creating Features from Tabular Data
- **Class 14:** Associating Tabular Data (Joins and Relates)

Week 8: Editing Features and Attributes

Recap of Season 9 & 10

- **Interactive** feature selection
- Select features using **attributes**
- Select features by **location**
- Work with **selected features**
- **Query expressions**
- Managing **Feature Visibility**

Creating and Modifying Labels

in ArcGIS Pro

Label in ArcGIS Pro

A label is a piece of text on the map that is dynamically placed and whose text string is derived from one or more feature attributes.

In ArcGIS Pro, labeling refers specifically to the process of automatically generating and placing descriptive text for features in maps and scenes.

Turn on and off labels

- To turn on labels, select a feature layer in the **Contents** pane.
- On the **Feature Layer** tab set, click the Labeling tab. In the Layer group, click **Label**.

Labeling properties

- Access the basic labeling properties on the Labeling tab.
- Change the size and color of the labels in the Text Symbol group.

Specify text for labels

- Label text strings are derived from one or more feature attributes.
- Labels are dynamic, so if feature attribute values change, the labels also change.
- When you turn on labeling, features are initially labeled based on one field; for example, on a meteorological map, you might label weather stations with daily precipitation.
- This single field-based label is set on the Labeling tab.

https://pro.arcgis.com/en/pro-app/latest/help/mapping/text/specify-text-for-labels.htm

Change how labels are displayed

Label symbols

Placement styles

Label vs. Annotation

In ArcGIS, labels are dynamic text generated automatically from a layer's attributes, while annotation is for static, manually placed text that can be edited individually.

Labels can be convert labels as annotation

Label expressions

- Using an advanced label expression, you can add any Arcade, Python, VBScript, or JScript logic to label expressions, including conditional logic and looping.
- For example, you can produce labels that have only the first letter of each word capitalized, regardless of how the text strings are stored in the attribute fields.

Expression examples

Concatenate a string to the value in a field. For example, the following expression creates a label in which the value of the PARCELNO field is preceded by the text "Parcel no:":

Arcade

```
"Parcel no: " + $feature.PARCELNO
```

Python

```
"Parcel no: " + [PARCELNO]
```

VBScript

```
"Parcel no: " & [PARCELNO]
```

JScript

```
"Parcel no: " + [PARCELNO]
```

Possible use cases of Label Expression

Stack text from multiple fields

Convert to uppercase and lowercase

Convert to proper case

Label with part of the string

Format Label

Create a conditional if-else statement

References

Labeling basics in ArcGIS Pro

https://pro.arcgis.com/en/pro-app/latest/help/mapping/text/labeling-basics.htm

ArcGIS Pro: Effective Use of Labels and Annotation

https://www.esri.com/content/dam/esrisites/en-us/about/events/media/UC-2019/technical-workshops/tw-5775-834.pdf

Exercise

Exercise

1. Label a point feature class.
2. Update the symbology of a label.
3. Convert labels of a feature class to annotation and observe the difference between labels and annotations.

Sample Shapefiles - City of Newcastle, Australia

https://classroom.google.com/c/NzkxNDA4MzgwOTE3/m/ODAzNjU5NTY0Mzc0/details

Preview for Season 12

Adding Text to a Map: Using **Label Classes**