TemporalSplit

Title TemporalSplit

Description

This tool is a simple geoprocessing scripting tool intended to split a feature class based on a time field or a start or end time into multiple feature classes based on a start or end time. The bins are based on a time interval and a predetermined start time.

Usage

This tool is used to split a feature class based on time interval. After being split, iterators in model builder can be used to do aggregation, kernel densities, and other geoprocessing operations.

Syntax

TemporalSplit (Input_Feature_Class, Output_Workspace, Start_Time_or_Single_Time_Field, {End_Time}, Time_Interval, {Bin_Start}, Compact_Workspace)

Parameter	Explanation	Data Type
Input_Feature_Class	Dialog Reference Is the input feature class or table that will be split based on a datetime field. Python Reference Uses Python deltatime and datetime libraries.	Feature Layer
Output_Workspace	Dialog Reference The output workspace such as a file geodatabase, that will receive the new output feature classes split based on a date field. There is no python reference for this parameter.	Workspace
Start_Time_or_Single_Time_Field	Dialog Reference Either the single datetime field or a start field that will be used with an endtime to extract all datetime values that are within the range of the created timebins. There is no python reference for this parameter.	Field
End_Time (Optional)	Dialog Reference This optional field is only used with specific datasets that have an end time field. If there is not end time field chosen, only start time will be used to both construct the time ranges and the final end time. Python Reference **if** FieldExist(*inFeatureClass*, *end_time*) **and** *end_time*:	Field

	arcPrint("Using start and end time to grab feature classes whose bins occur within an events " "start or end time.") end_time_min, end_time_max = get_min_max_from_field(*inFeatureClass*, *end_time*) start_time_field = *start_time* *end_time_field = end_time start_time_range = start_time_min end_time_range = end_time_maxelse: arcPrint("Using only first datetime start field to construct time bin ranges.") start_time_field = start_time end_time_field = start_time start_time_range = start_time_min end_time_range = start_time_max*	
Time_Interval	Dialog Reference The number of seconds, minutes, hours, days, weeks, or years that will represent a single time step. Examples of valid entries for this parameter are 1 Day, 12 Hours, 30 Seconds, or 1 Minute. Units greater than weeks will break the tool, if you need years, put it into day or week equivalents. _____ Python Reference **@arcToolReportdef construct_time_bin_ranges (*first_time*, *last_time*, *time_delta*): temporal_counter = *first_time total_time_range = last_time - first_time bin_count = int(np.ceil (total_time_range.total_seconds() / time_delta.total_seconds())) nested_time_bin_pairs = [] for bin in range(bin_count): start_time = temporal_counter end_time = temporal_counter + time_delta nested_time_bin_pairs.append ([start_time, end_time]) temporal_counter = end_time return nested_time_bin_pairs*** ***Lž****	Time unit
Bin_Start (Optional)	Dialog Reference This is the time you want the binning process to start from. If you place a datetime here, it will replace the minimum time value of the start time field you selected as the bin start time. For example selecting 1990/1/1 12:00:00 AM would start the binning interval at that time period rather than a minimum calculated by the script. There is no python reference for this parameter.	Date
Compact_Workspace	Dialog Reference Optionally will compact the workspace after the tool runs. Will skip on a workspace you can't compact.	Boolean

There is no python reference for this parameter.

Code Samples

There are no code samples for this tool.

Tags

Time, Feature class, split, FGDB, time bins

Credits

David Wasserman

Use limitations

There are no access and use limitations for this item.

You are currently using the Item Description metadata style. Change your metadata style in the Options dialog box to see additional metadata content.