Cache Tile Change Detection

Introduction

This sample provides an example of how to enable feature class change detection and use the results to update tiles in cache based only on changes. This will allow caches to be updated quickly without rebuilding the entire cache, which is time consuming, and resource intensive. At the ArcGIS 10.2 release, this model has works with one of two geoprocessing tools. Compare two feature classes in a file geodatabase or Show Edits since Reconcile Geoprocessing Tool. Compare two feature classes in a file geodatabase will create a feature class of changes features based on geometry and or attributes that have changed since the last update. The Show Edits since Reconcile geoprocessing tool generates a feature class of all the edits for a single feature class between versions in a multi-user geodatabase. Both tools can be used in this workflow to rebuild areas of a map cache where the underlying features have been edited.

This sample was written to provide a business partner with the ability to accept a Shapefile or Geodatabase Feature Class uploaded over the internet or FTP to a directory. The new Shapefile or Geodatabase Feature Class is copied to a file geodatabase or SDE Geodatabase where it is compared to the old feature class. The output changes feature are then buffered by 2500 feet. This will insure that he changes are picked up by all scale levels within the Cache Map service and all tiles are correctly updated. This distance can be modified higher or lower based on user testing. Once the buffered feature class is created this tool stops the map service of the cache that needs to be updated and overwrites the published feature class and the "old" feature class as well. This ensures that the published feature class has the latest attributes and the tiles are updated correctly. Additionally the tool copies the "new" feature class as the "old" so the model is ready to run the next time the new updates are uploaded. Finally, the service is restarted and the cache tile buffer is passed into the Manage Map Server Cache Tiles. This force the Cache to only be updated where underlying features have changed.

Install Note
This download includes sample data so you can see how the workflow needs to be configured before you wire up and connect your own data.

Installation Steps

The model have been saved to remember relative paths so you should not have to repair broken links. This model is using the Compare Feature Classes Tool. If you are using the Show Edits since Last Reconcile tool you do not need to stop the service, delete features, copy features, and restart the service.

1. Download and unpack the UpdateCacheGeoprocessingPackage
2. Replace the Roads Publication and Production feature classes with the features you want to compare
3. Replace the Roads Publication feature class connected to the delete process

4. Attach the cache service you want update linked to the Manage Map Server Cache Tiles tool
5. Run the Model.