



**McElhanney**

# Geographic Tagging Tool

**Documentation**

**October 7<sup>th</sup>, 2019**





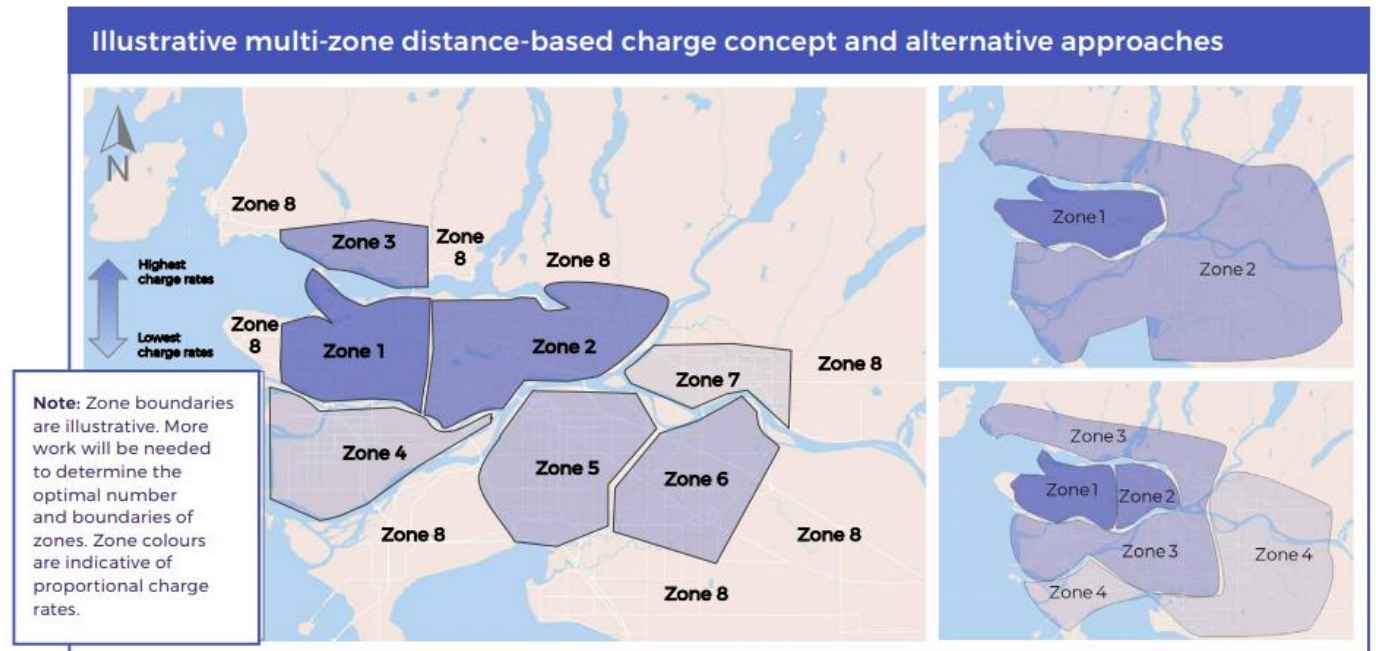
# Purpose

- Add a link attribute with value for network links based on a shapefile. Can be used to define areas for a variety of purposes



# Example

- Mobility Pricing Independent Commission requested modelling work to evaluate the impact of multi-zone distance-based charges.
- The zone number is assigned the link attribute to reflect different charge rates.
- The link attribute needs to be updated for every network edits; this is a lot of work.
- A GIS-based tool was developed to perform the zone id look-ups from polygon shapefile.



MPIC: *Metro Vancouver Mobility Pricing Study Report*, Page 41



# Link Tagging Tool

## Tag Polygon Attribute to EMME Link

Selected attribute in polygon shapefile will be tagged to EMME Link

Select Scenario for EMME Link Tags:

1 - Placeholder Scenario

Select Link Attribute for EMME Link Tags:

Polygon Shapefile:

hapefiles for RTM\RTM\_8ZonePolygon.shp

Browse...

Enter the field name in polygon shapefile:

Id

Enter algorithm if there are multiple match:

by\_length  
tag\_max; tag\_min; by\_length; do\_not\_change; set\_to\_-1.0

Run

Recent history



© 2018 INRO. All rights reserved.

- pick scenario from drop-down list
- enter link attribute  
example: @tag
- select shapefile  
projection should be WSG 84 / UTM zone 10N Vancouver Special
- enter the attribute name in the shapefile
- select algorithm for link tagging  
see next page

Table

RTM\_8ZonePolygon

FID	Shape *	Id
0	Polygon ZM	1
1	Polygon ZM	2
2	Polygon ZM	3
3	Polygon ZM	4
4	Polygon ZM	5
5	Polygon ZM	6
6	Polygon ZM	7
7	Polygon ZM	8

RTM\_8ZonePolygon

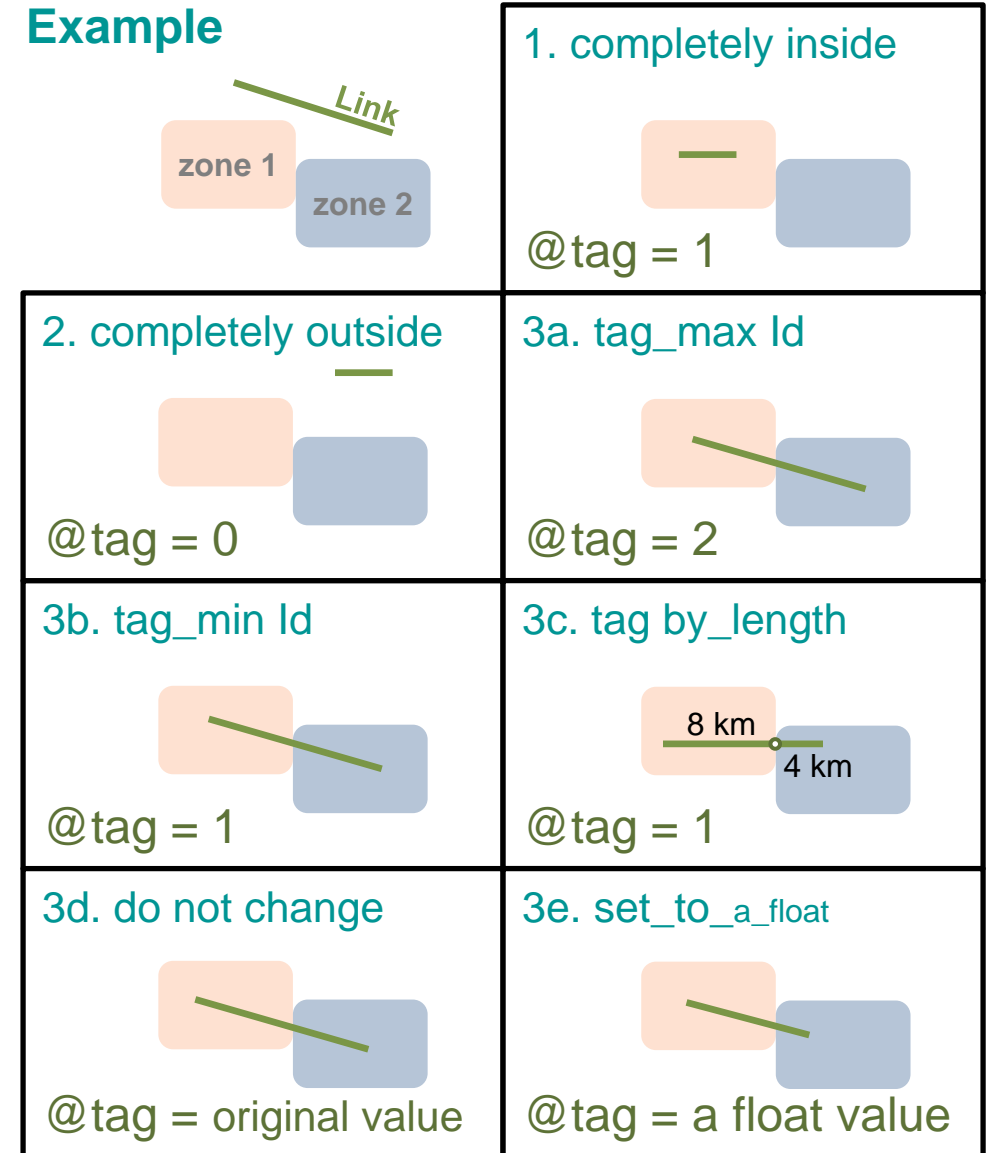
Table Of Contents Table



# Algorithms

1. If EMME link is completely within a polygon object, polygon shapefile “Id” is set to selected extra attribute “@tag”
2. If EMME link is completely outside all polygon objects, default value 0 is recorded
3. If EMME link is partially within one or more polygons, pick an algorithm:
  - a. tag\_max: tag the maximum value from all matches
  - b. tag\_min: tag the minimum value from all matches
  - c. by\_length: tag the polygon attribute with longest section of EMME Link in it
  - d. do\_not\_change: do not change the extra attribute value
  - e. set\_to\_-1.0: set the extra attribute value to -1.0, this could be any float value

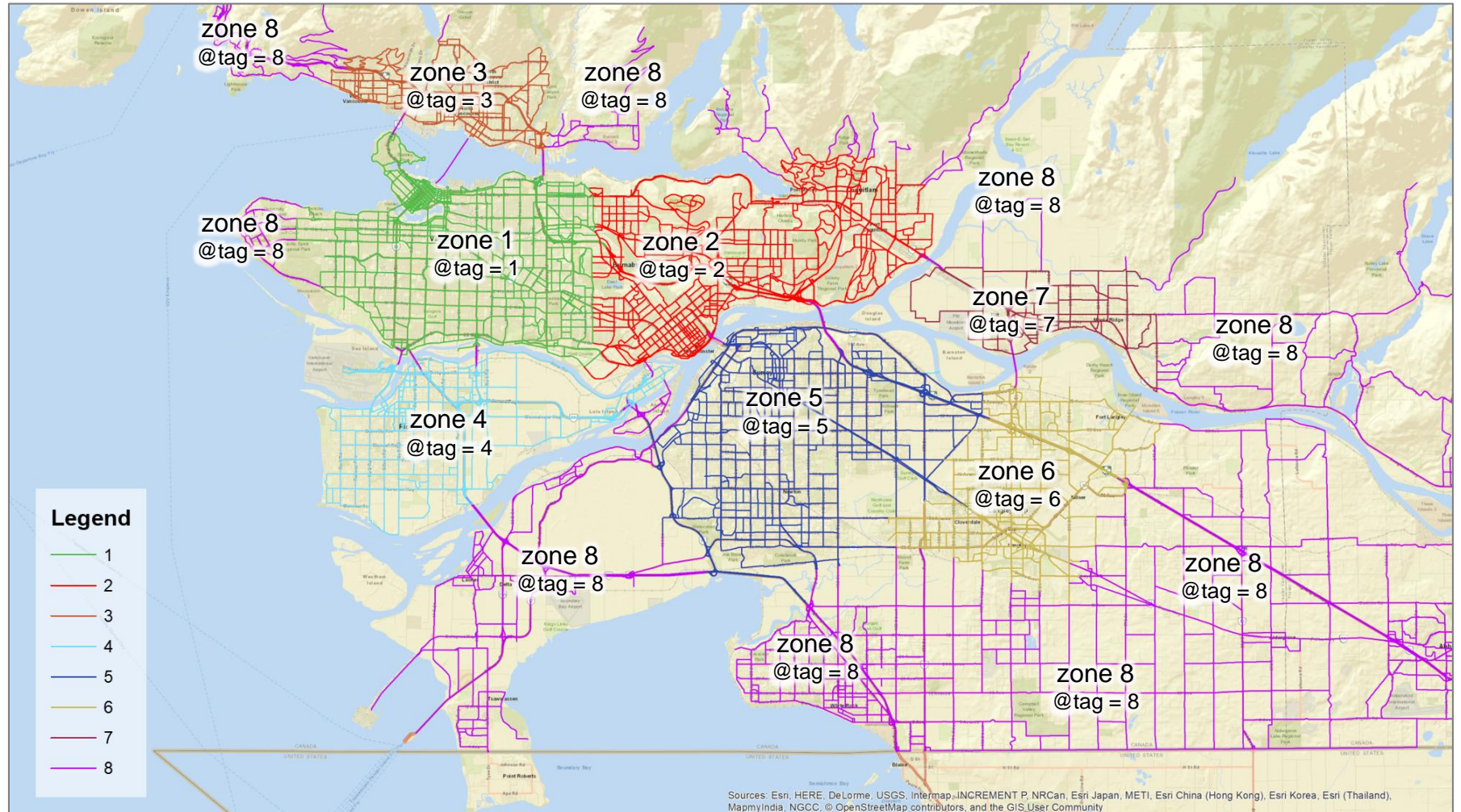
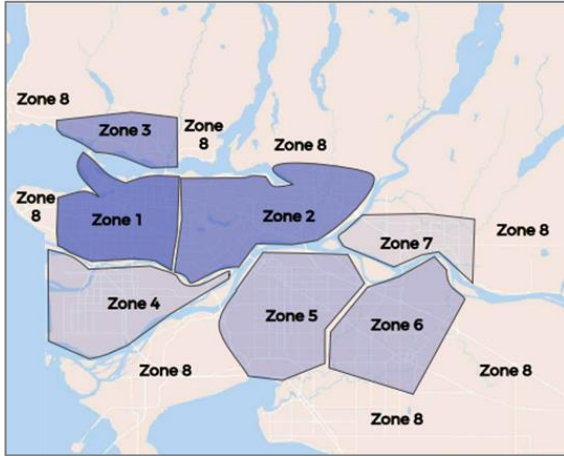
## Example







# Sample Outputs



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community