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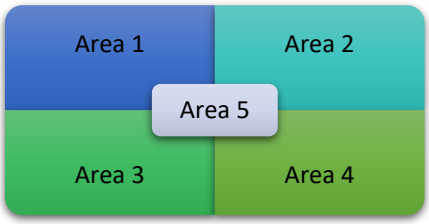
Q. How to count the adjacent sides of a target area to other area/ areas?

Polyline method:

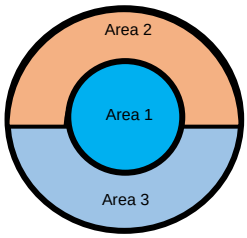
- Counting every single broken polyline can say us the touching other areas number of a target area.



- Sides touched by Area 1 = 3
- Sides touched by Area 2 = 3
- Sides touched by Area 3 = 3
- Sides touched by Area 4 = 3
- Sides touched by Area 5 = 4

Problems:

- Areas are not in regular shape
- Polylines may be criss-crossed
- Lines are not seperable on expected points (Then new Arc map is required)
- Two areas may touch two or more places keeping another area inside.



- Areas touched by Area 1 = 2
  - Sides touched by Area 1 = **2**
- Areas touched by Area 2 = 2
  - Sides touched by Area 2 = **3 (Problem)**
- Areas touched by Area 3 = 2
  - Sides touched by Area 3 = **3 (Problem)**

Polypoint method:

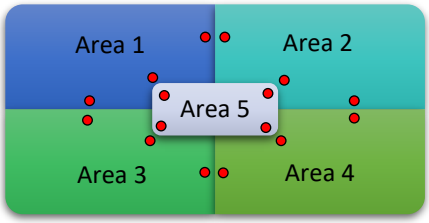
- One line means two areas. So placing two points on both sides of an area and finally counting the points can give the number of touching areas of the targeted area.

Problems:

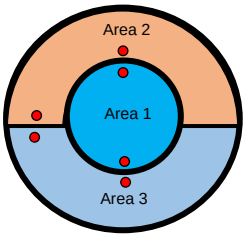
- Two areas may touch two or more places keeping another area inside.

Solution:

- Two areas may touch in several points according to global map but for those two areas I have counted one line is equal to two points on both sides.
- Create a new point shape file.
- One point is equal to one touched side.
- Finally, the spatial join tool has done the calculation.



- Area 1 has points = 3
- Area 2 has points = 3
- Area 3 has points = 3
- Area 4 has points = 3
- Area 5 has points = 4



- Area 1 has points = 2
- Area 2 has points = 2
- Area 3 has points = 2