



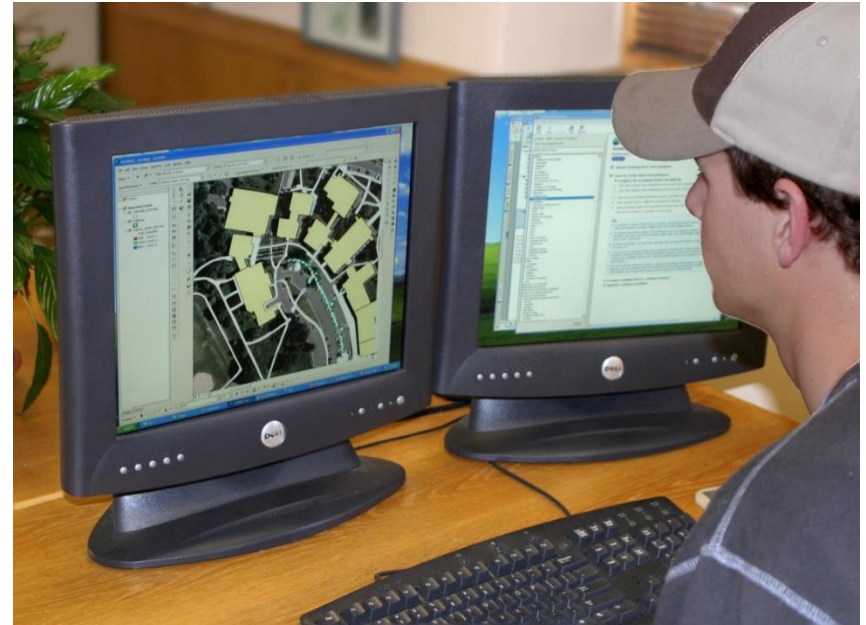
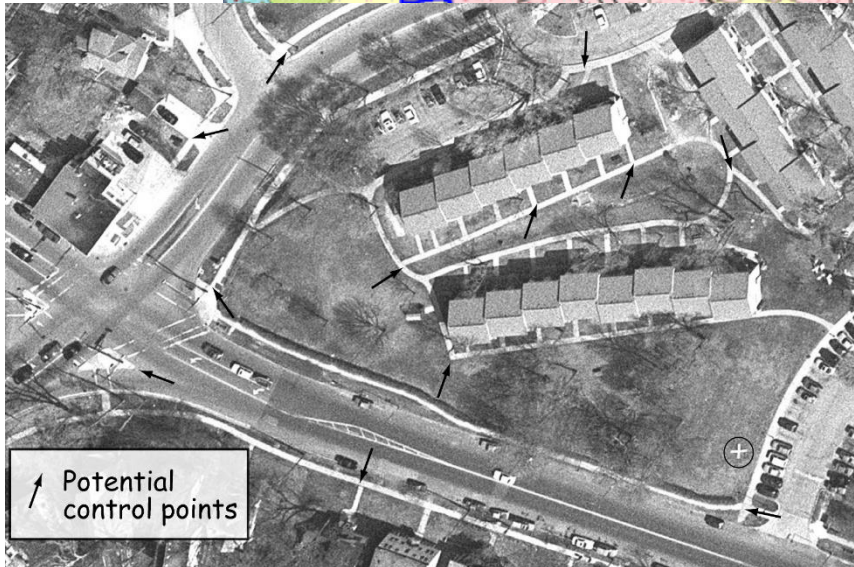
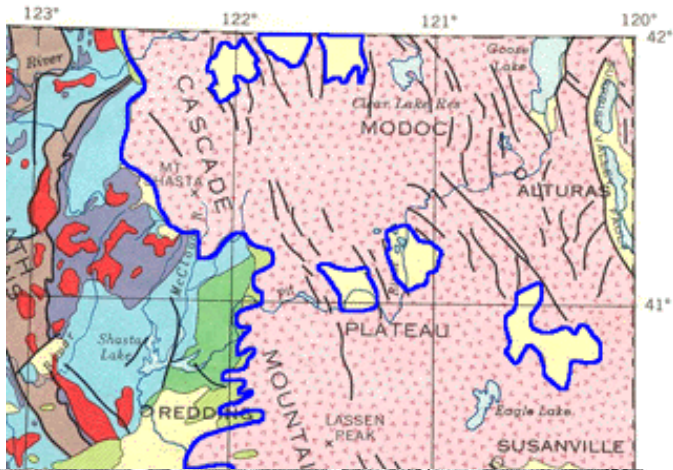
# 데이터 정확도와 분석

Data Accuracy and Analysis

# 데이터 정확도



## Digitizing



디지털화하려면 실제 좌표로 변환 할 수 있는  
**제어점(Control points)** 정의

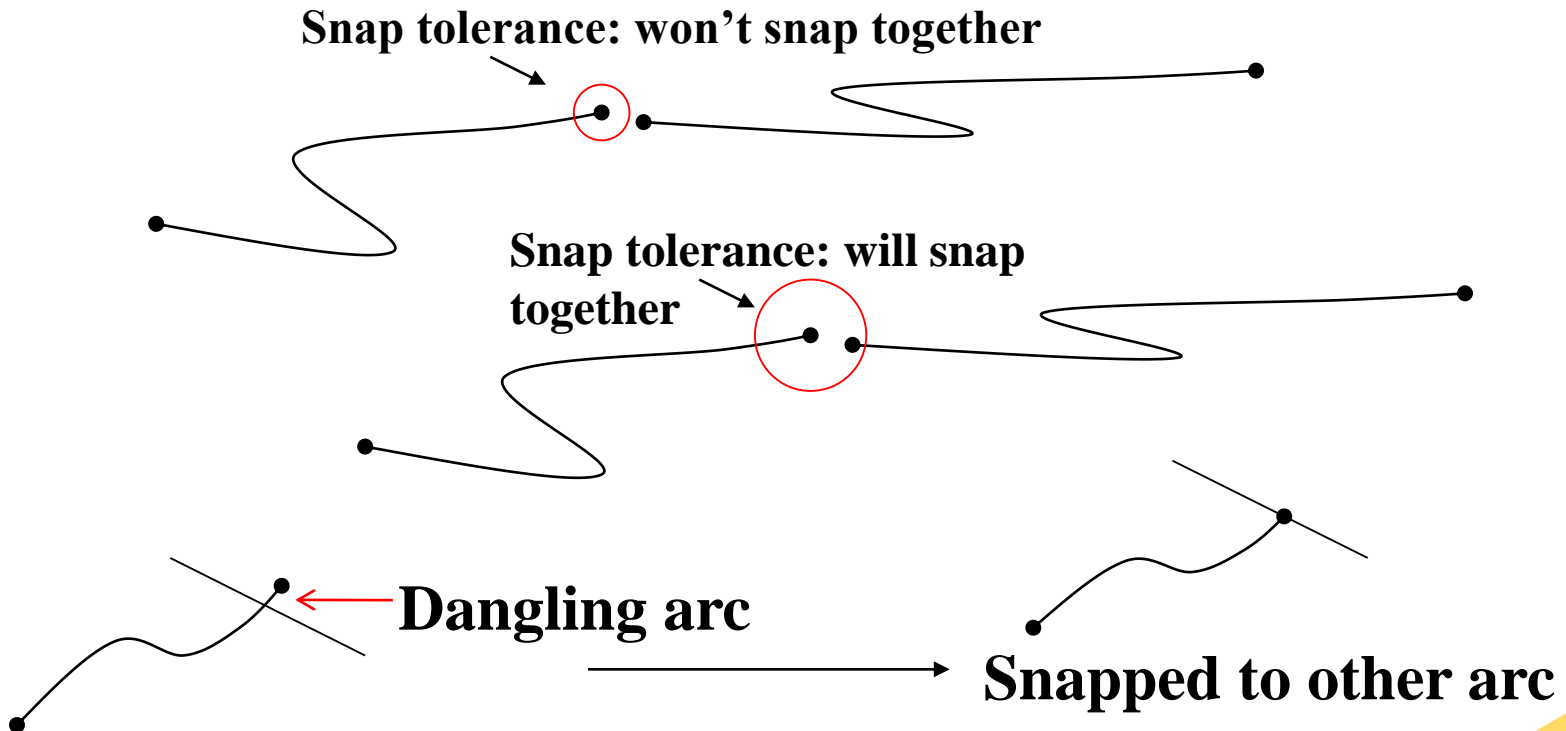
**Drone 사진에서 응용**

# 데이터 정확도



## Digitizing

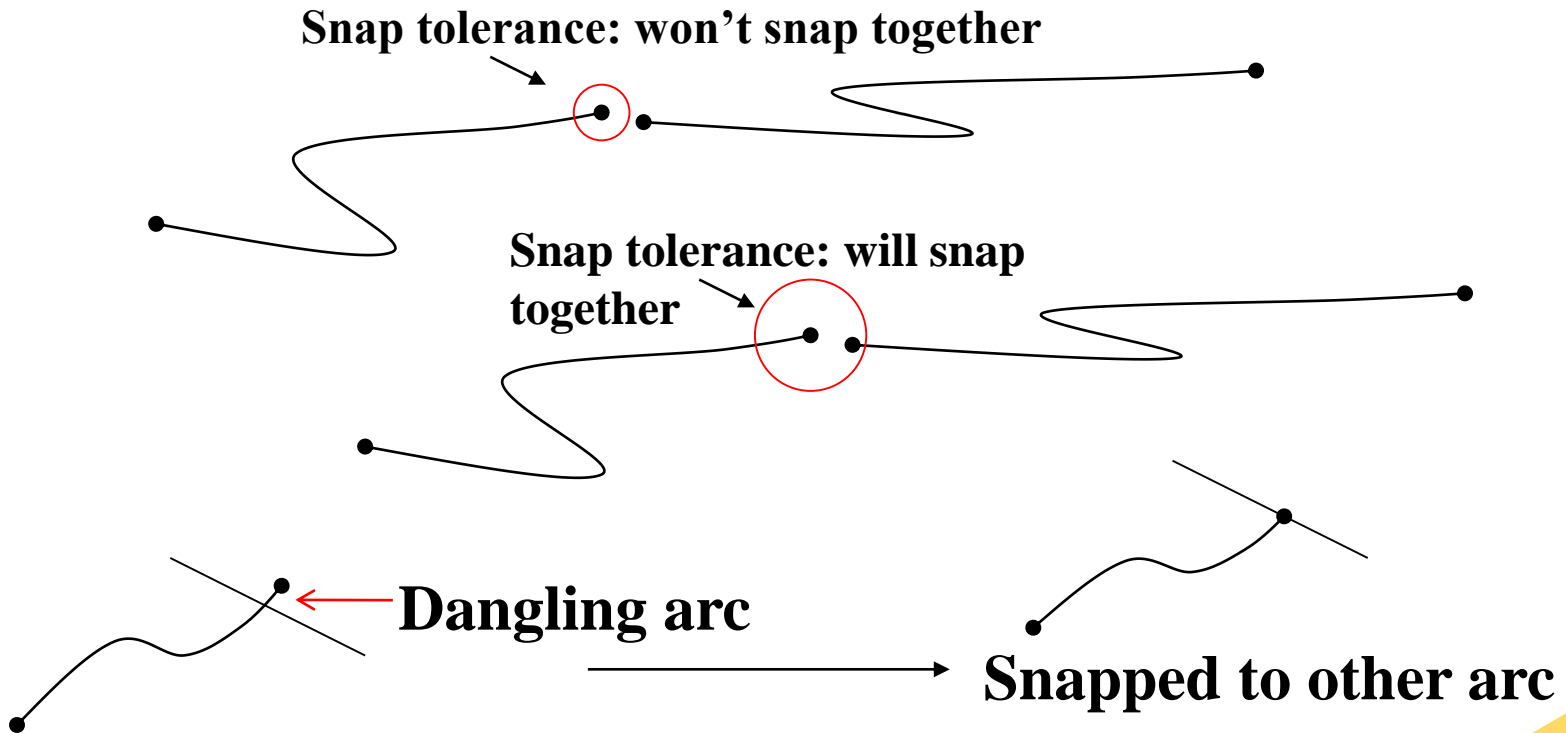
- **Snapping:** Any unsnapped lines or polygons are snapped closed, and dangling lines are clipped off, based on user-defined tolerances





## Digitizing

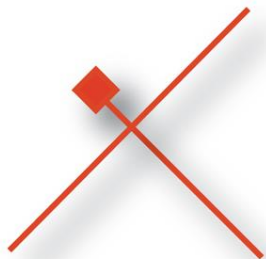
- **Snapping:** Any unsnapped lines or polygons are snapped closed, and dangling lines are clipped off, based on user-defined tolerances



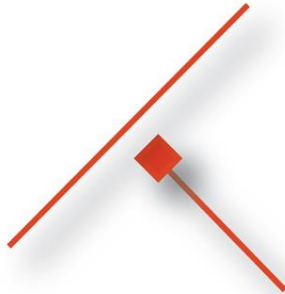


## Digitizing

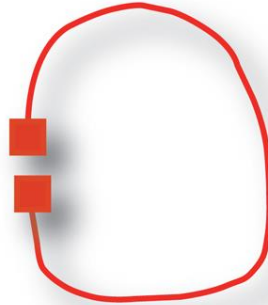
### Topological Errors Introduced During the Creation of a Geospatial Database



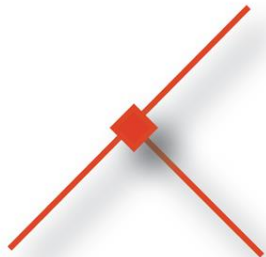
a. Line overshoot.



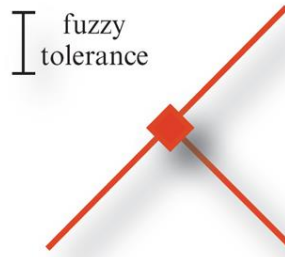
b. Line undershoot.



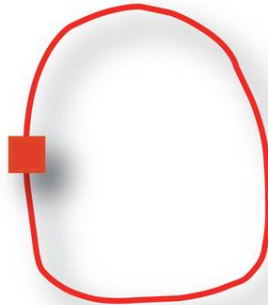
c. Unclosed polygon.



d. Corrected overshoot.

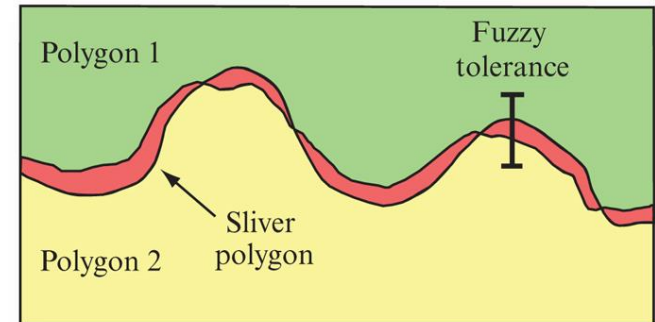


e. Corrected undershoot.

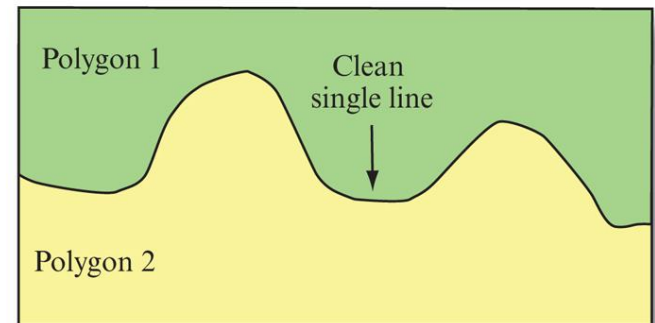


f. Closed polygon.

### Geometric Error between Two Adjacent Polygons



a. Geometric error along the common border of two adjacent polygons.



b. Clean single line shared by both polygons after use of a fuzzy tolerance.

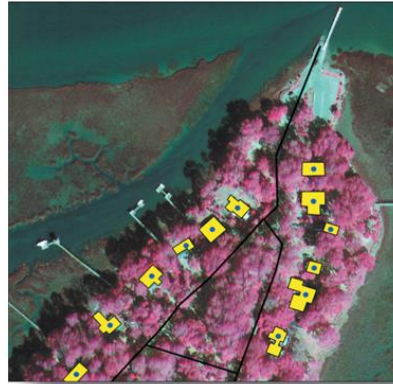
© 2013 Pearson Education, Inc.



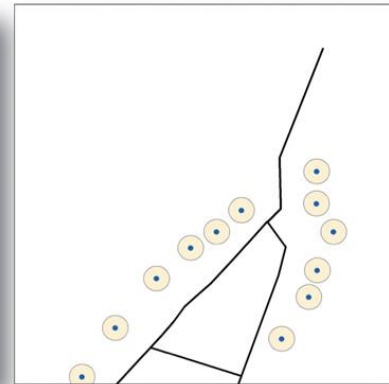


## Buffering (Point)

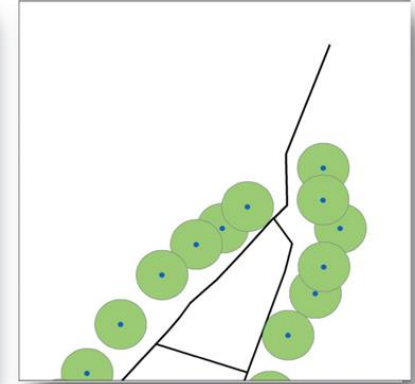
### Buffering Point Features



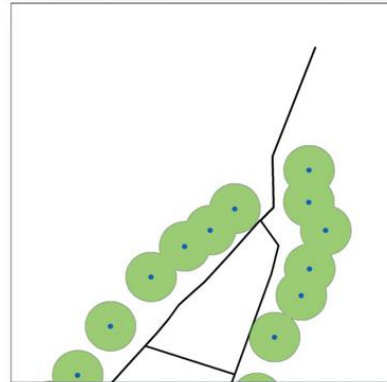
a. Point (building centroids), line (road network), and area (building footprint) features.



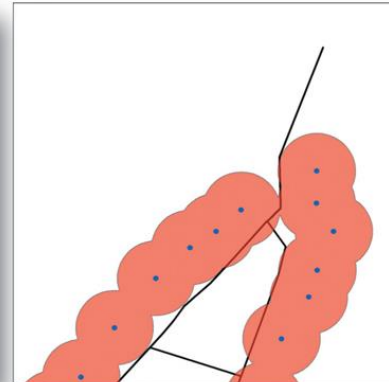
b. 10 m buffer around building centroids.



c. 20 m buffer around building centroids with no dissolve.



d. 20 m buffer around building centroids with dissolve.



e. 30 m buffer around building centroids with dissolve.

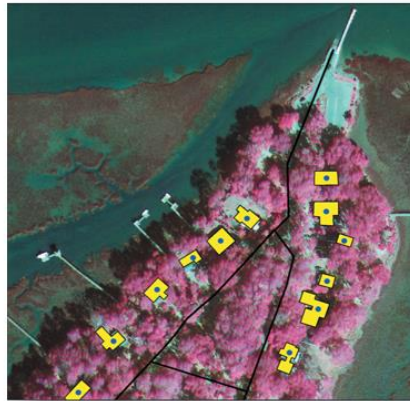


f. 10 m, 20 m, and 30 m buffers around building centroids with dissolve.

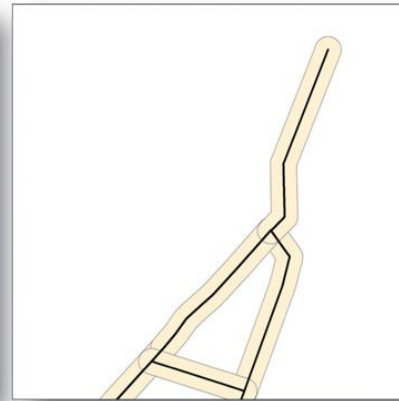


## Buffering (Line)

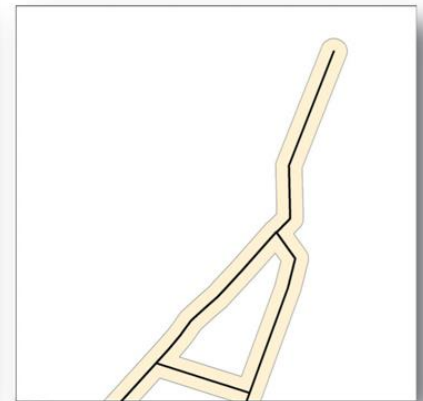
### Buffering Linear Features



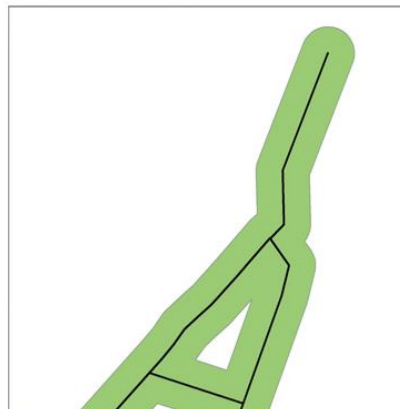
a. Point (building centroid), line (road network), and area (building footprint) features.



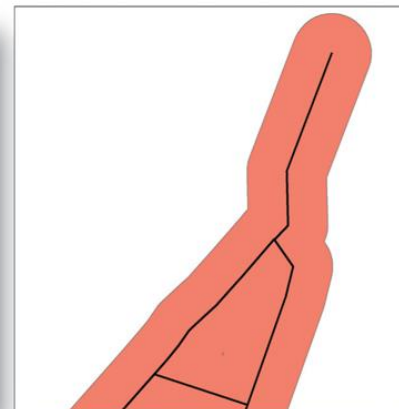
b. 10 m buffer around streets with no dissolve.



c. 10 m buffer around streets with dissolve.



d. 20 m buffer around streets with dissolve.



e. 30 m buffer around streets with dissolve.

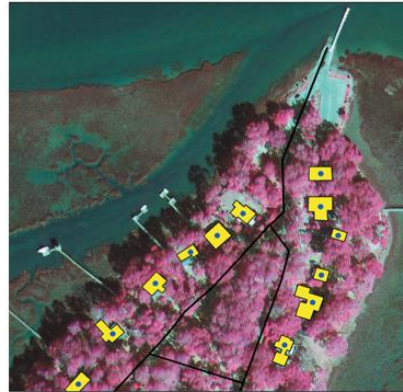


f. 10 m, 20 m, and 30 m buffers around streets with dissolve.

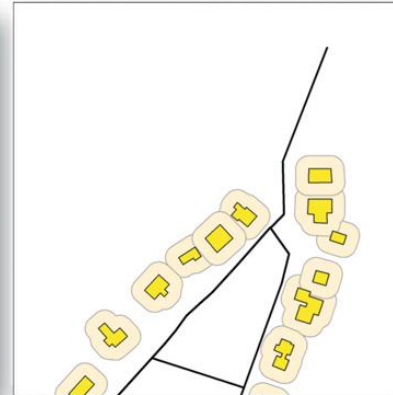


## Buffering (Area)

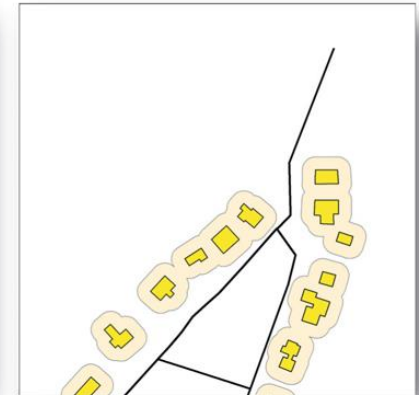
### Buffering Area Features



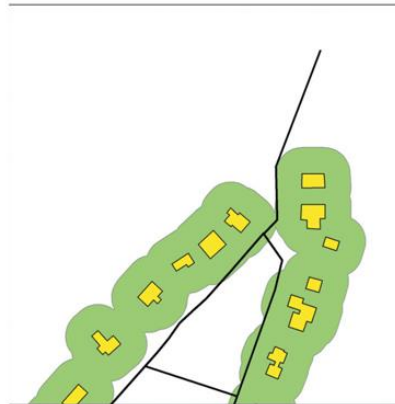
a. Point (building centroid), line (road network), and area (building footprint) features.



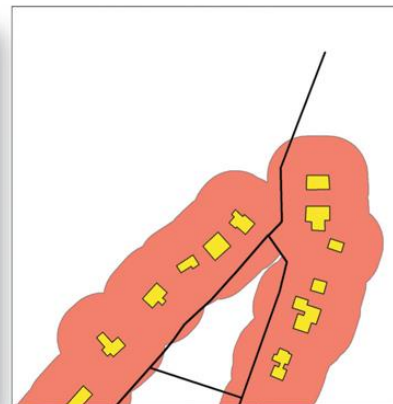
b. 10 m buffer around building footprints with no dissolve.



c. 10 m buffer around building footprints with dissolve.



d. 20 m buffer around building footprints with dissolve.



e. 30 m buffer around building footprints with dissolve.



f. 10 m, 20 m, and 30 m buffers around building footprints with dissolve.

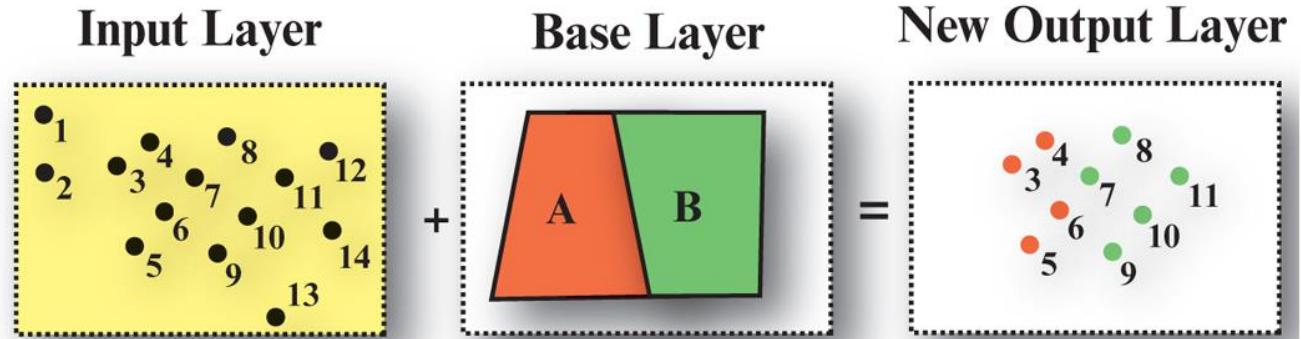


# 데이터 정확도

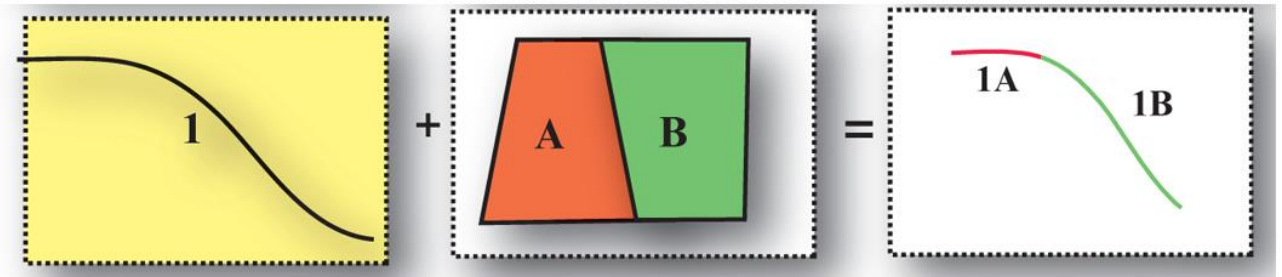


## Vector Overlay Operations

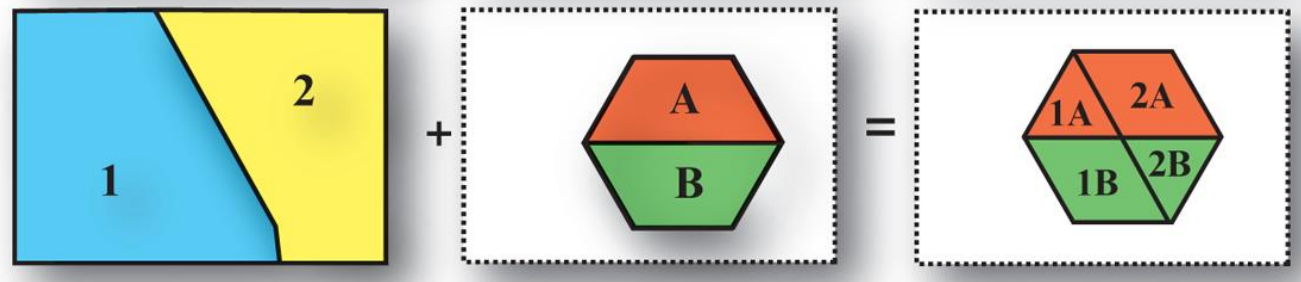
a. Point-in-polygon



b. Line-in-polygon



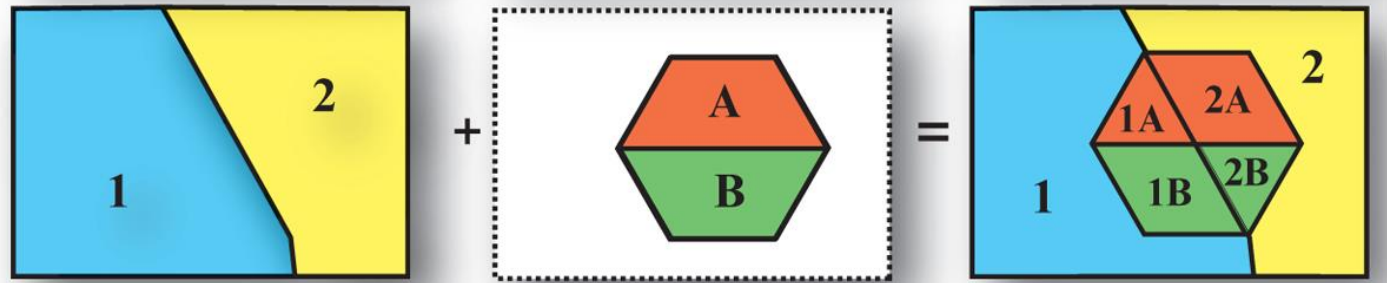
c. Intersection



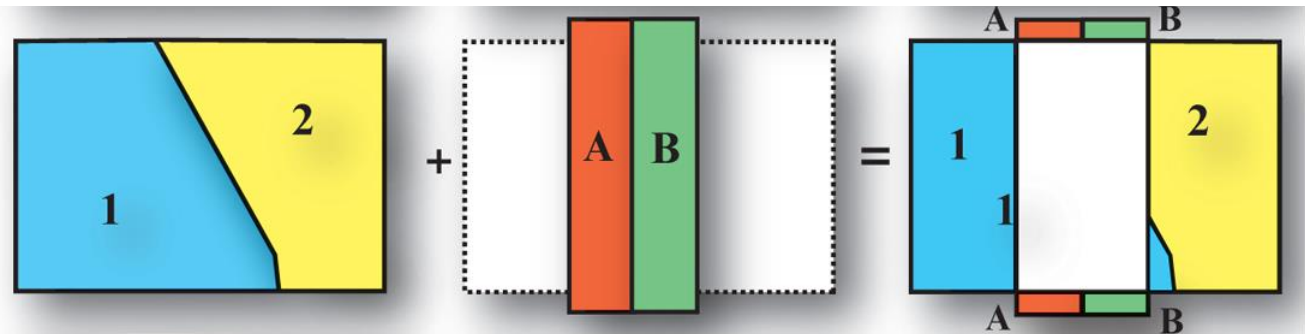


## Vector Overlay Operations

d. Union

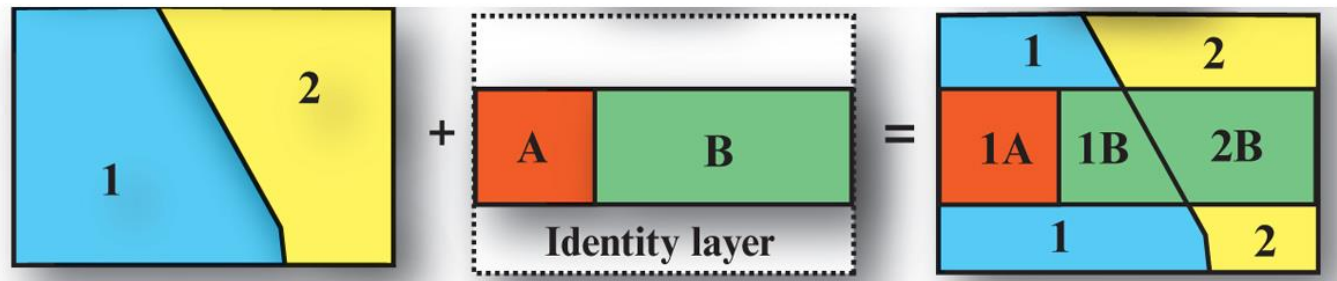


e. Symmetrical Difference



© 2

f. Identity

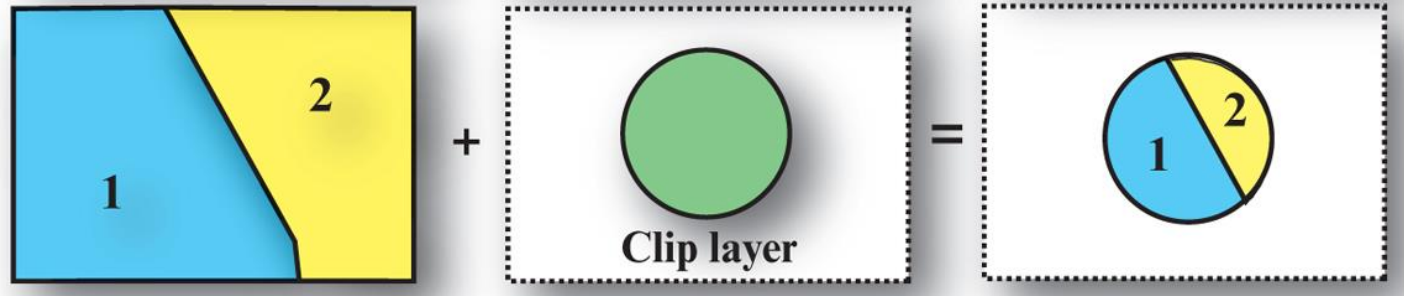


# 데이터 정확도



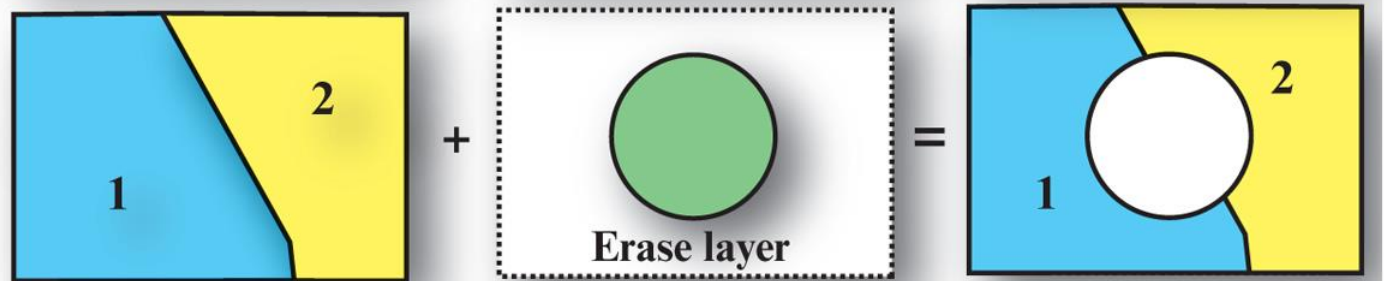
## Vector Overlay Operations

g. Clipping

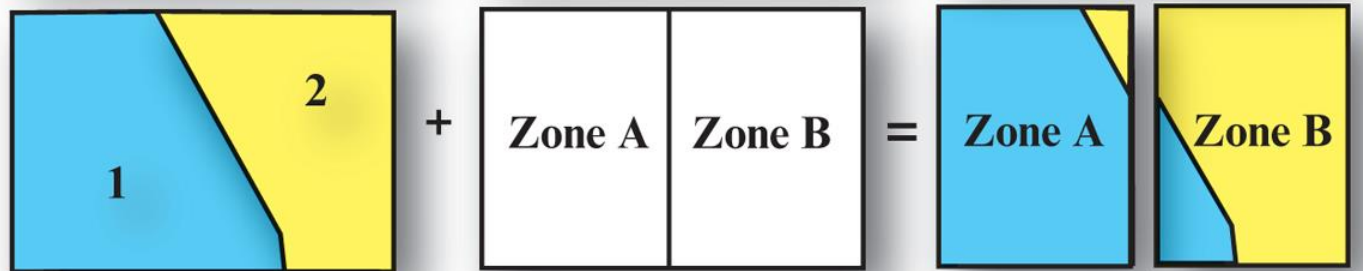


© 2

h. Erasing



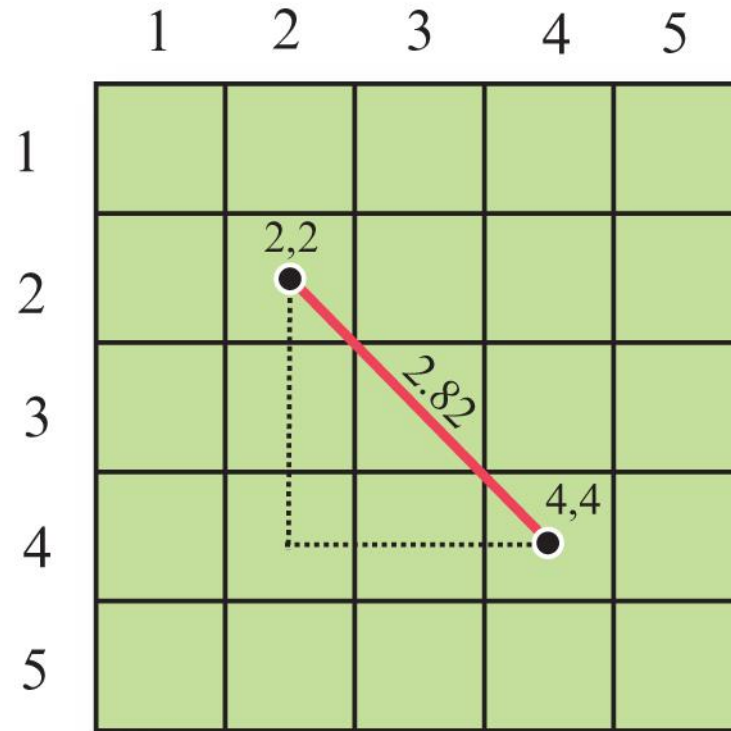
i. Splitting





## Raster Buffering

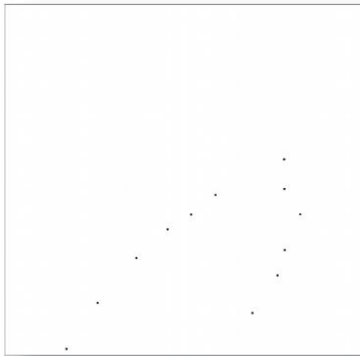
Distance between  
Cells 2,2 and 4,4



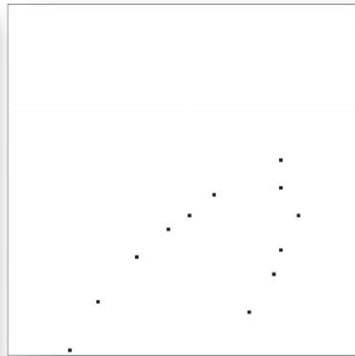


## Raster Buffering

### Raster Buffering of Point Features



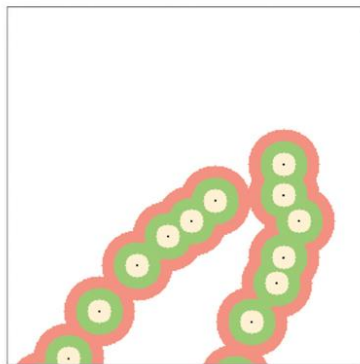
a. Building centroids at 1 x 1 m spatial resolution.



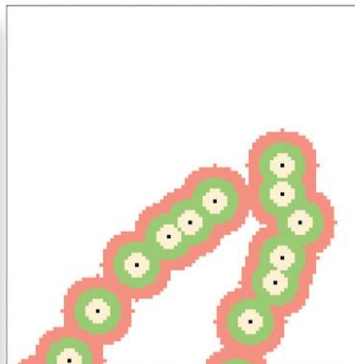
b. Building centroids at 3 x 3 m spatial resolution.



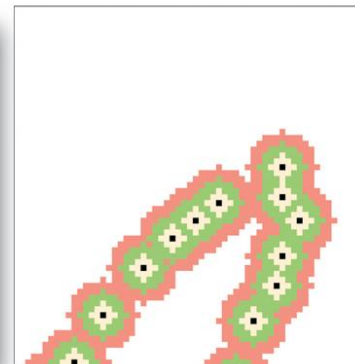
c. Building centroids at 5 x 5 m spatial resolution.



d. 1 x 1 m building centroid pixels buffered to 10 m, 20 m, and 30 m.



e. 3 x 3 m building centroid pixels buffered to 10 m, 20 m, and 30 m.



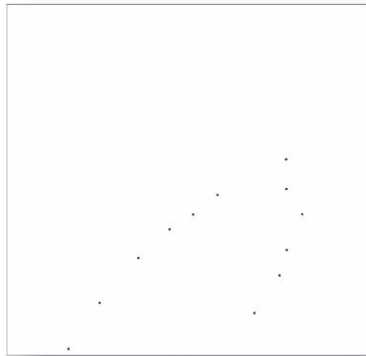
f. 5 x 5 m building centroid pixels buffered to 10 m, 20 m, and 30 m.



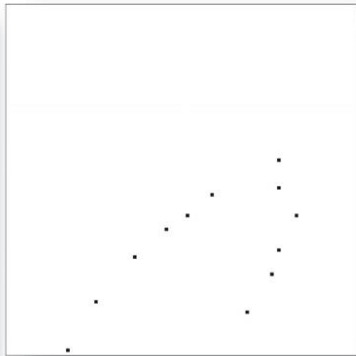


## Raster Buffering

### Raster Buffering of Point Features



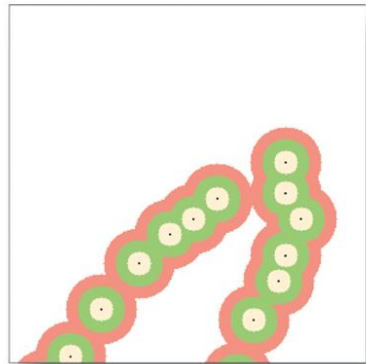
a. Building centroids at 1 x 1 m spatial resolution.



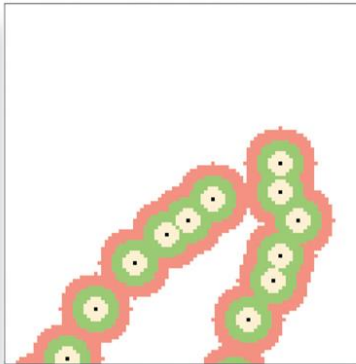
b. Building centroids at 3 x 3 m spatial resolution.



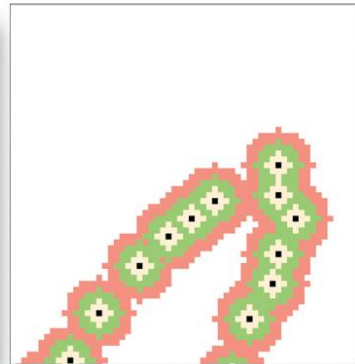
c. Building centroids at 5 x 5 m spatial resolution.



d. 1 x 1 m building centroid pixels buffered to 10 m, 20 m, and 30 m.

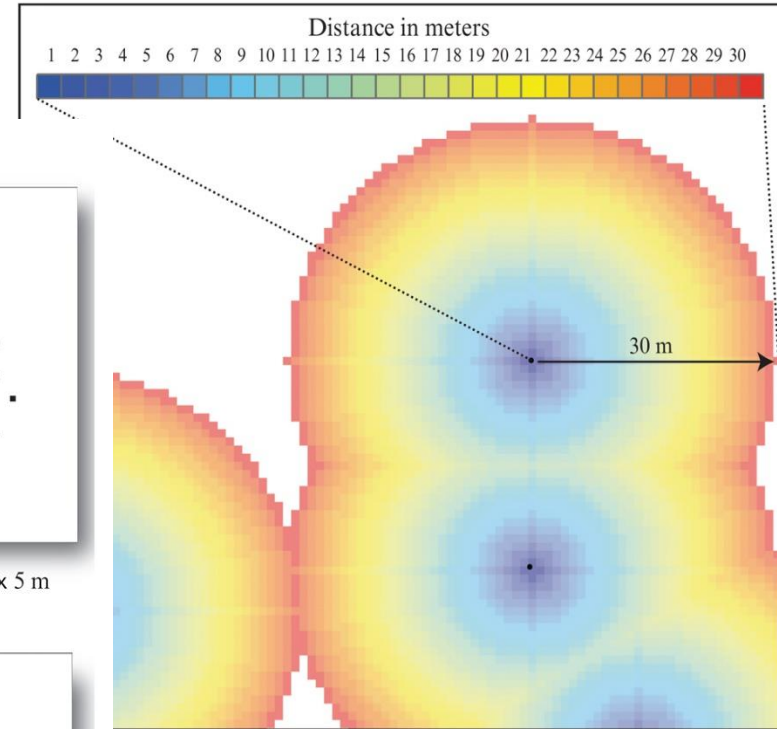


e. 3 x 3 m building centroid pixels buffered to 10 m, 20 m, and 30 m.



f. 5 x 5 m building centroid pixels buffered to 10 m, 20 m, and 30 m.

### Raster Buffering of Point (Building Centroid) Features

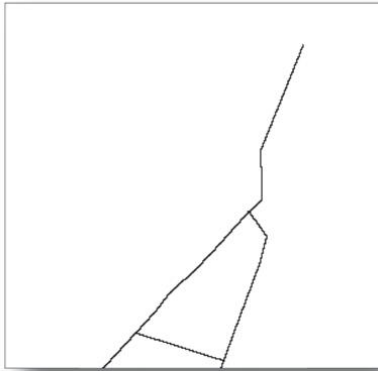


location, Inc.

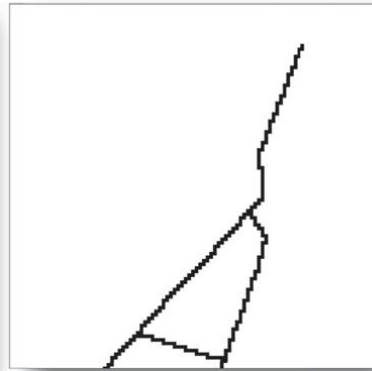


## Raster Buffering

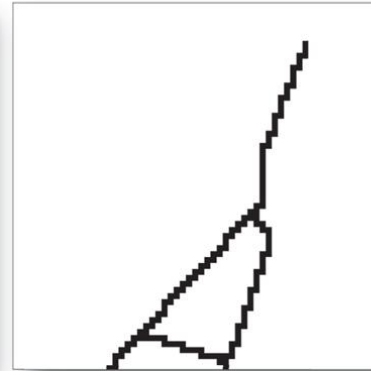
### Raster Buffering of Linear Features



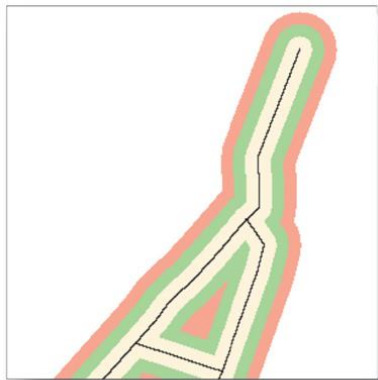
a. Linear street network at  $1 \times 1$  m spatial resolution.



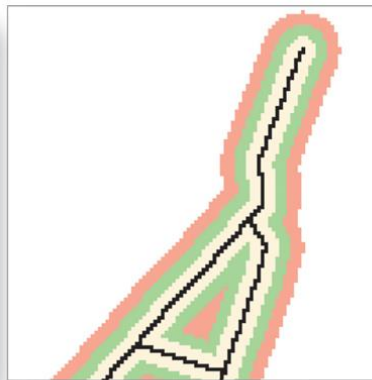
b. Street network at  $3 \times 3$  m spatial resolution.



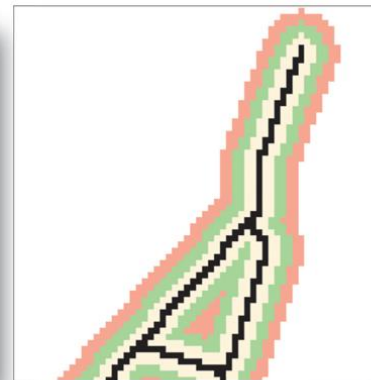
c. Street network at  $5 \times 5$  m spatial resolution.



d.  $1 \times 1$  m street pixels buffered to 10 m, 20 m, and 30 m.



e.  $3 \times 3$  m street pixels buffered to 10 m, 20 m, and 30 m.



f.  $5 \times 5$  m street pixels buffered to 10 m, 20 m, and 30 m.

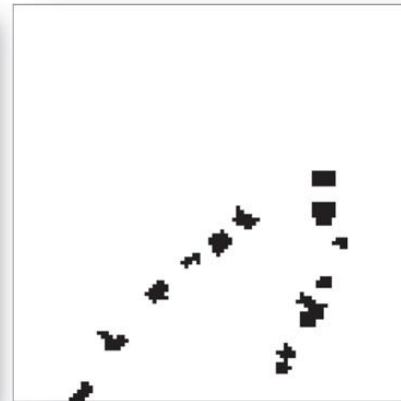


## Raster Buffering

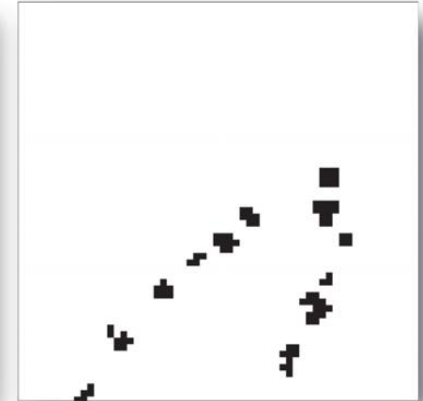
### Raster Buffering of Area Features



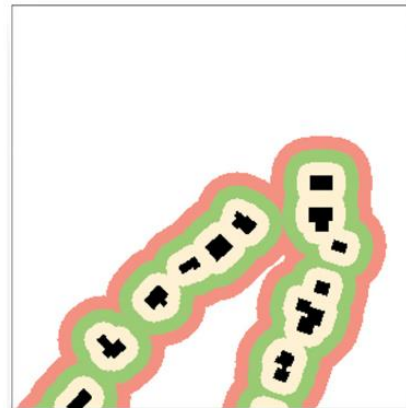
a. Building footprints at 1 x 1 m spatial resolution.



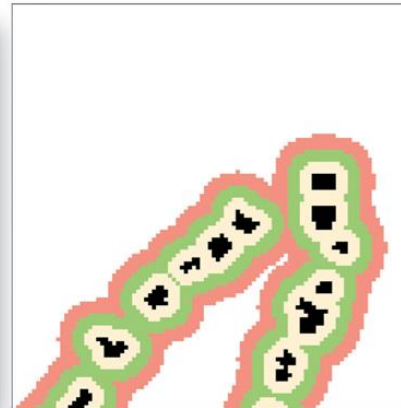
b. Building footprints at 3 x 3 m spatial resolution.



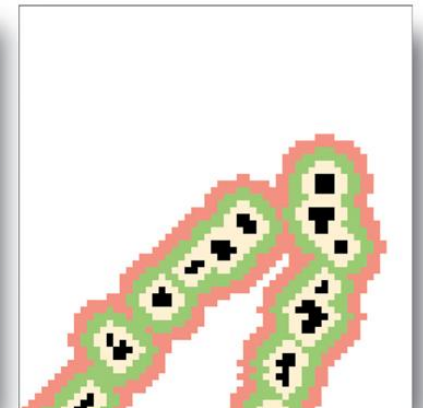
c. Building footprints at 5 x 5 m spatial resolution.



d. 1 x 1 m building footprint pixels buffered to 10 m, 20 m, and 30 m.



e. 3 x 3 m building footprint pixels buffered to 10 m, 20 m, and 30 m.



f. 5 x 5 m building footprint pixels buffered to 10 m, 20 m, and 30 m.