

Augmented Reality & Video Service Emerging Technologies

SIFT SURF FAST BRIEF ORB BRISK

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FAST



## FAST

### ❖ Bresenham Circle Computation

- Each corner has a point with two dominant and distinct gradient orientations
- Center pixel is compared with surrounding pixels in a circular pattern based on the Bresenham circle
  - Circular template to detect corners based on intensity comparison
  - Size of the connected pixels region is commonly 9 (FAST9) or 10 (FAST10) out of a possible 16 pixels

## FAST

### ❖ Threshold Comparison

- Each pixel is compared to a preset threshold value
- Determines whether the pixel value is greater or lesser than the center pixel
- Decision tree is used to quickly determine the comparison order of pixels
- FAST descriptor output is an adjoining bit vector form

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