

# Face recognition test metrics and test method

## Test metrics: False Acceptance Rate (FAR), False Rejection Rate (FRR)

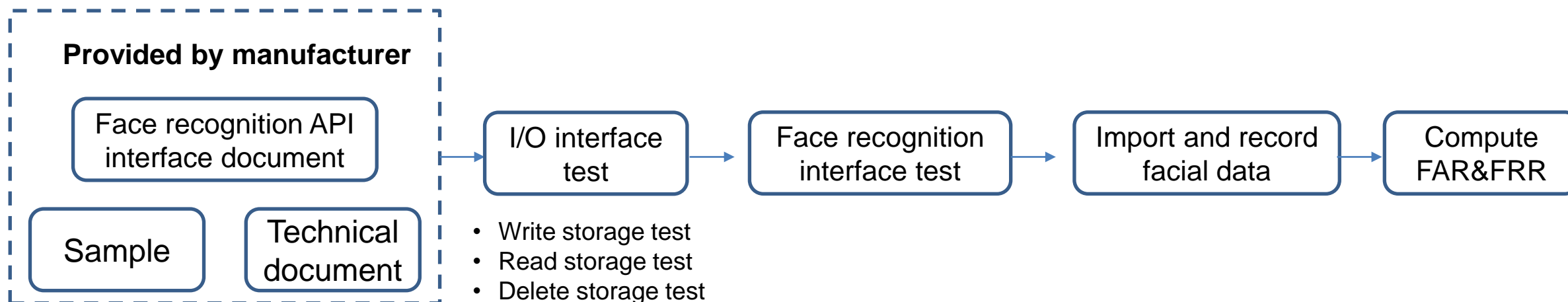
$$FAR = FMR * (1 - FTA)$$

Where,  
FMR is the false match rate;  
FTA is the failure-to-acquire rate.

$$FRR = FTA + FNMR * (1 - FTA)$$

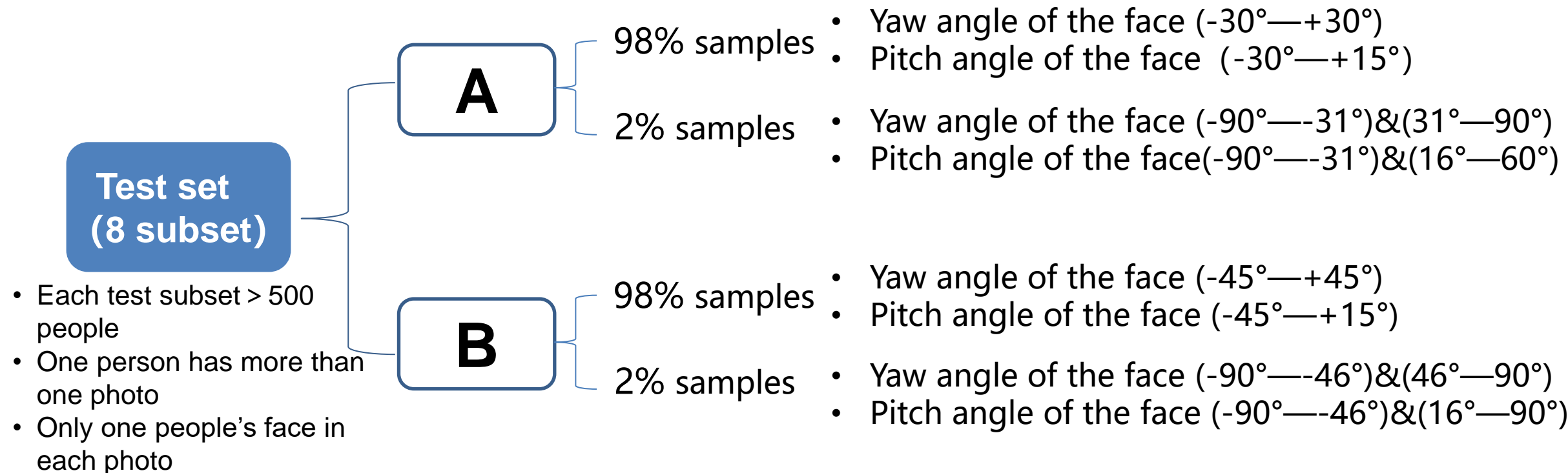
Where,  
FTA is the failure-to-acquire rate;  
FNMR is the false non-match rate.

## Test method:



Overall Requirements

- Male : Female=1:1
- Cover yellow, white, black and brown skin color
- Cover teenagers, middle to old age
- Resolution, no less than 640\*480 pixels
- Backlight : front light : side light of 90 degrees=1:2:1
- Facial occlusion (sunglasses, masks, hats, etc.) and heavy makeup samples should be at least 2%



Note: The above requirements are for 2D face test set construction, it is also applicable for 3D face test set construction except resolution