

## Training

Writings of Enrolled Users  
e.g., 90 seconds Input

Outlier Elimination

Word Segmentation

Sample Generation

### Data Processing

Frame-Level Feature

### Frame-Level Feature Extraction

Component-Level Feature

### Component-Level Feature Extraction

Component feature  
Quantization

Vocabulary of  
Primitives

Component Indices

Sample-Level Feature

### Sample-Level Feature Extraction

SVM  
Training

SVM  
Model(s)

Label: User  
Identity

### User Identification

## Testing

Writings of Testing Users  
e.g., 5 seconds Input

Outlier Elimination

Word Segmentation

Sample Generation

Frame-Level Feature

Component-Level Feature

Component Indices

Sample-Level Feature

SVM  
Classification

User Identity