

# **Spectral Matting**

**Supplementary material**

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MIT**

# Spectral clustering vs. spectral matting



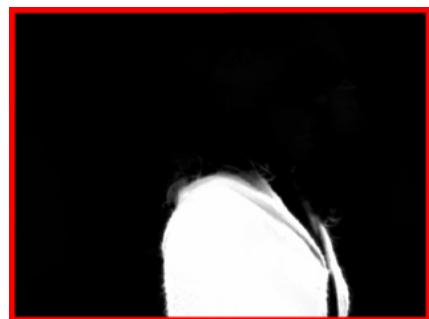
Input



Hard segments

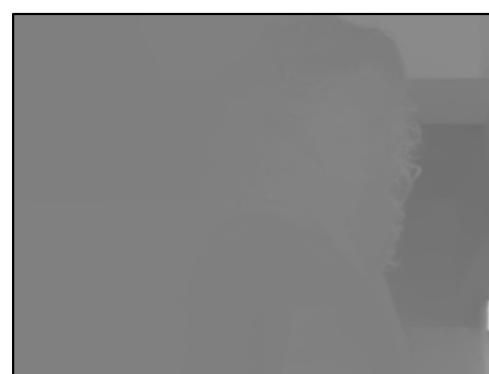
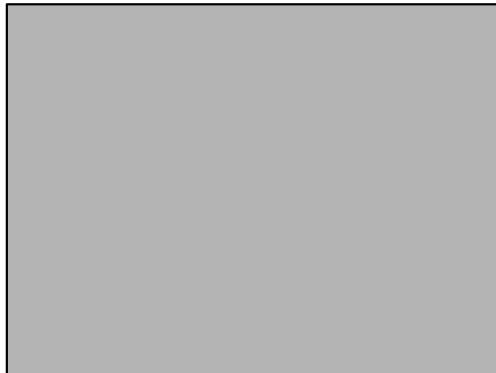


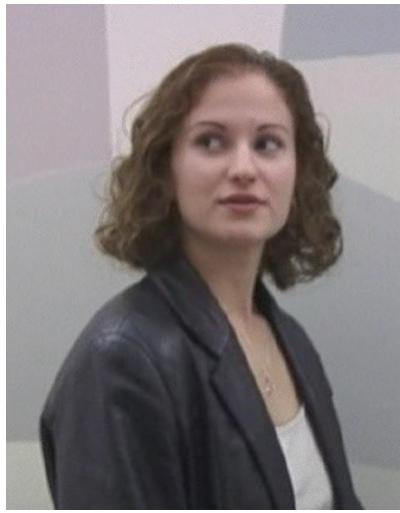
Matte from components



Matting components

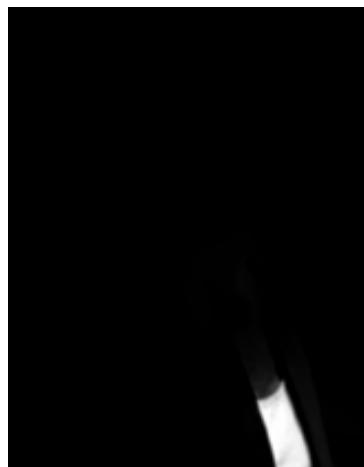
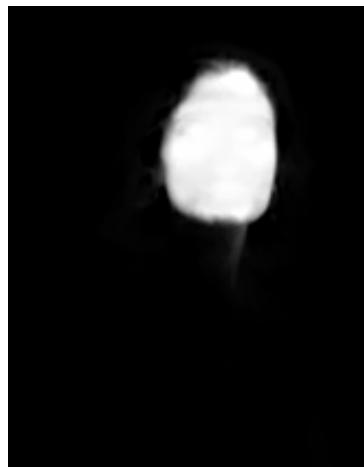
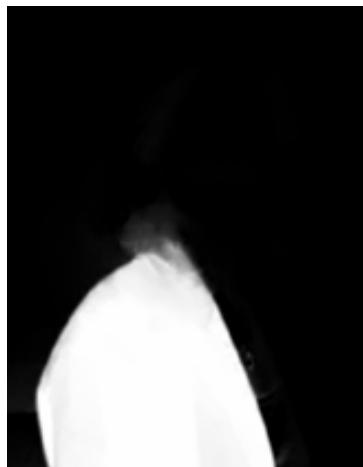
# Smallest Eigenvectors

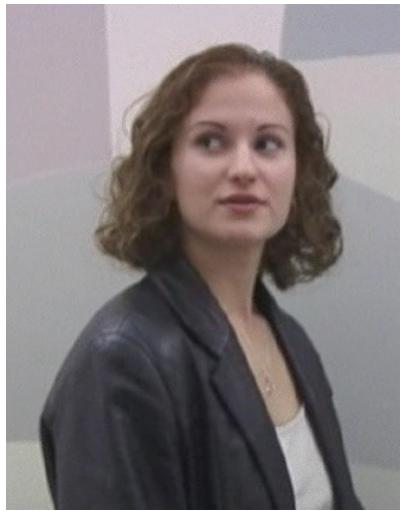




# Unsupervised Matting

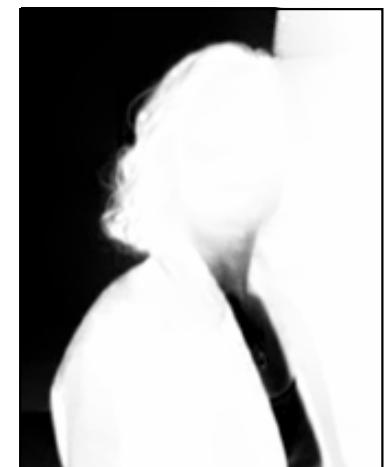
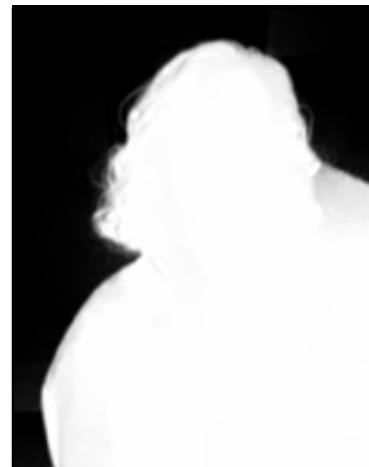
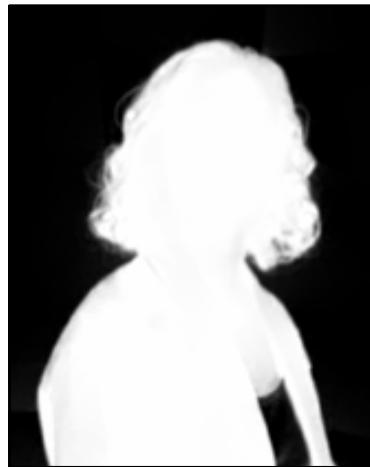
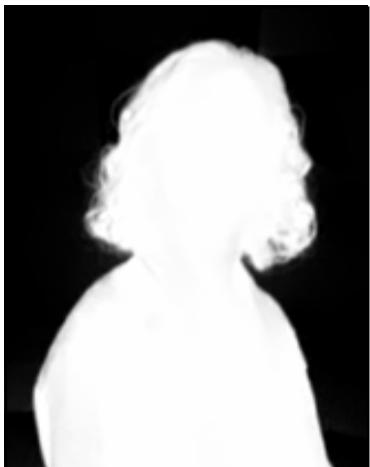
Matting components





# Unsupervised Matting

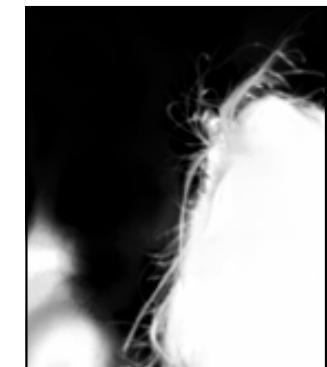
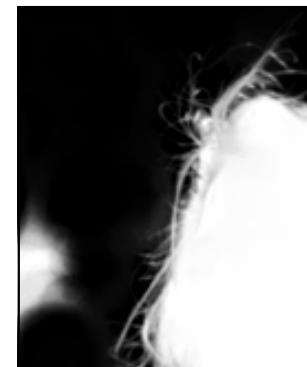
Matting candidates



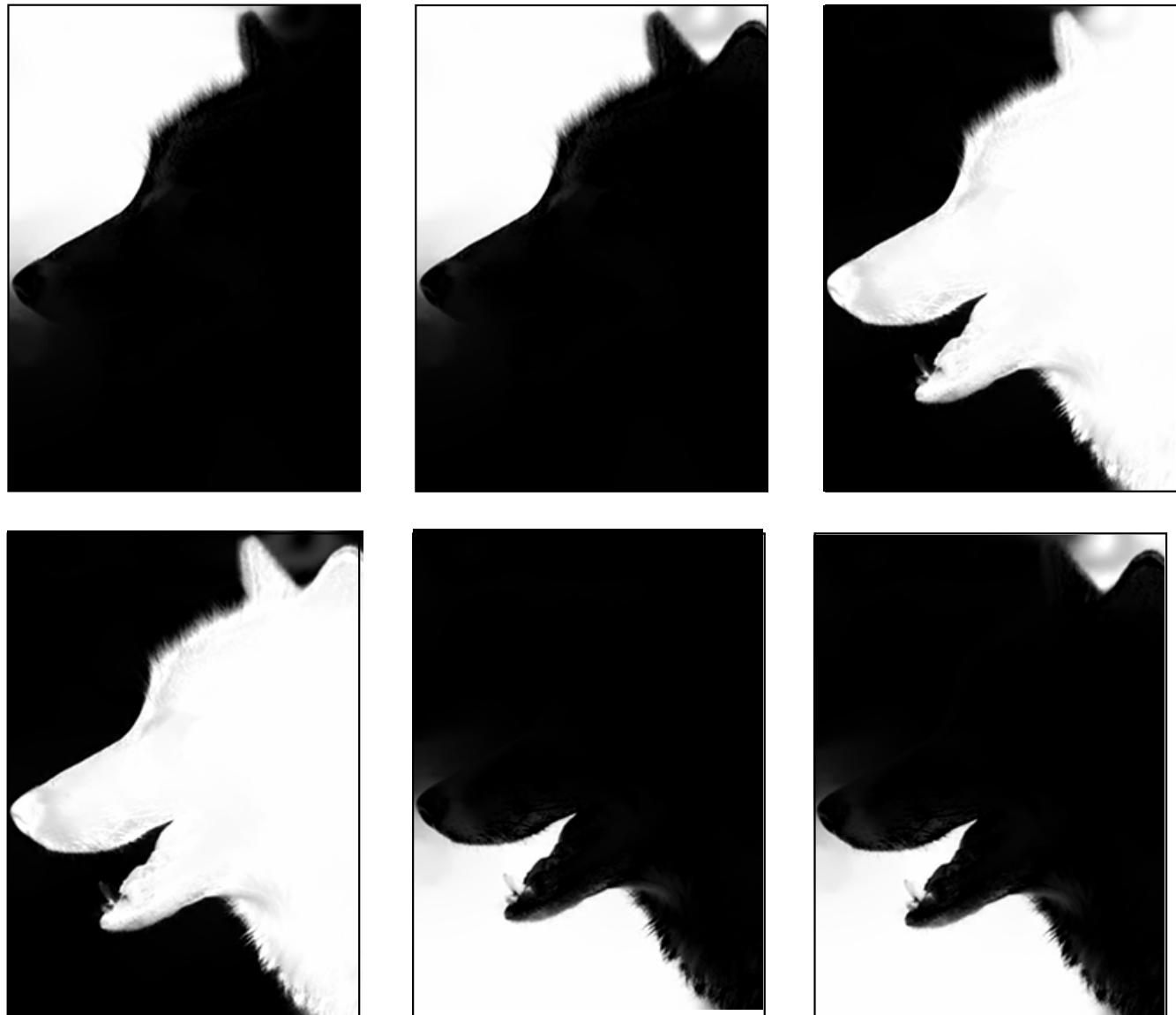
# Unsupervised Matting



Matting candidates



# Unsupervised Matting



Matting candidates

# Guided Matting



Components



Levin et al 06



Wang&Cohen 05

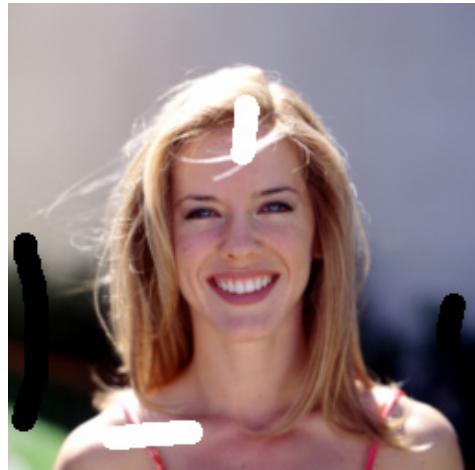


Random Walk

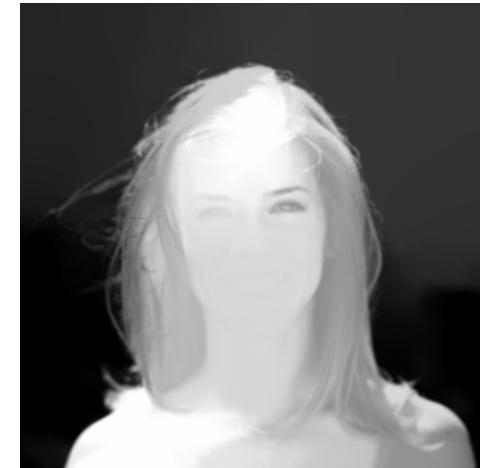


Poisson

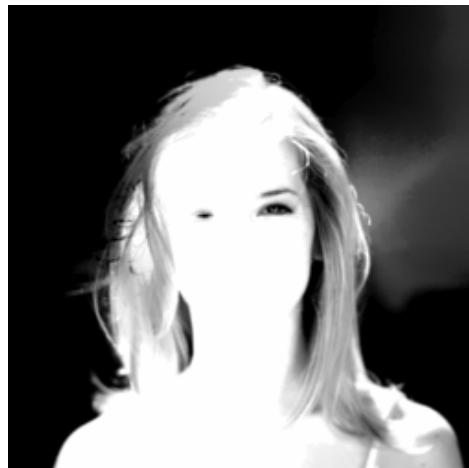
# Guided Matting



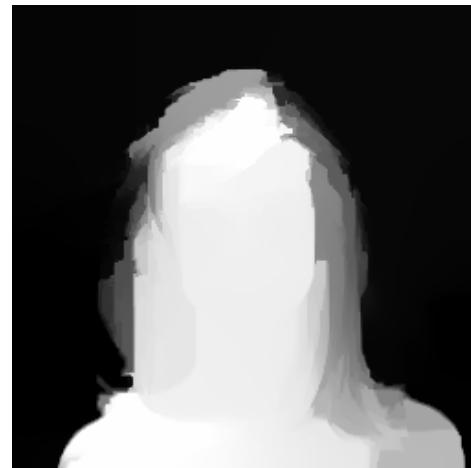
Components



Levin et al 06



Wang&Cohen 05



Random Walk



Poisson

# Guided Matting



Components



Levin et al 06



Wang&Cohen 05

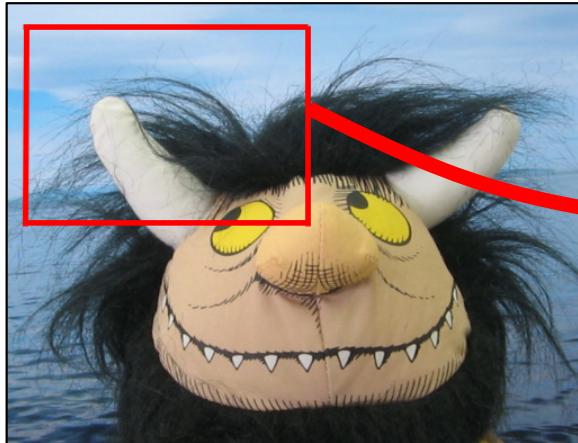


Random Walk

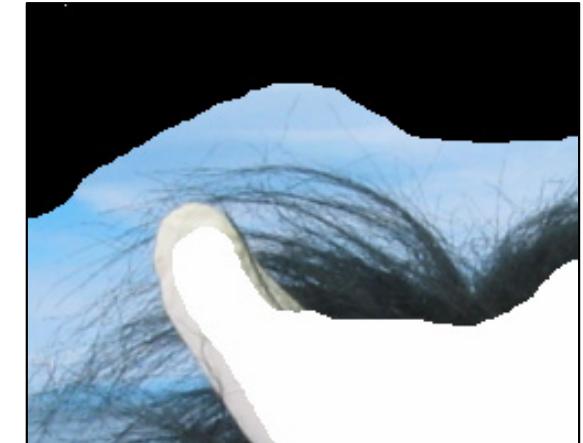


Poisson

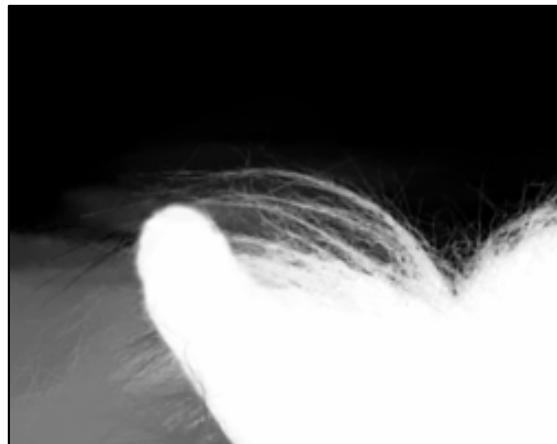
# Benefits of components picking



Input



User trimap



Levin et al from trimap



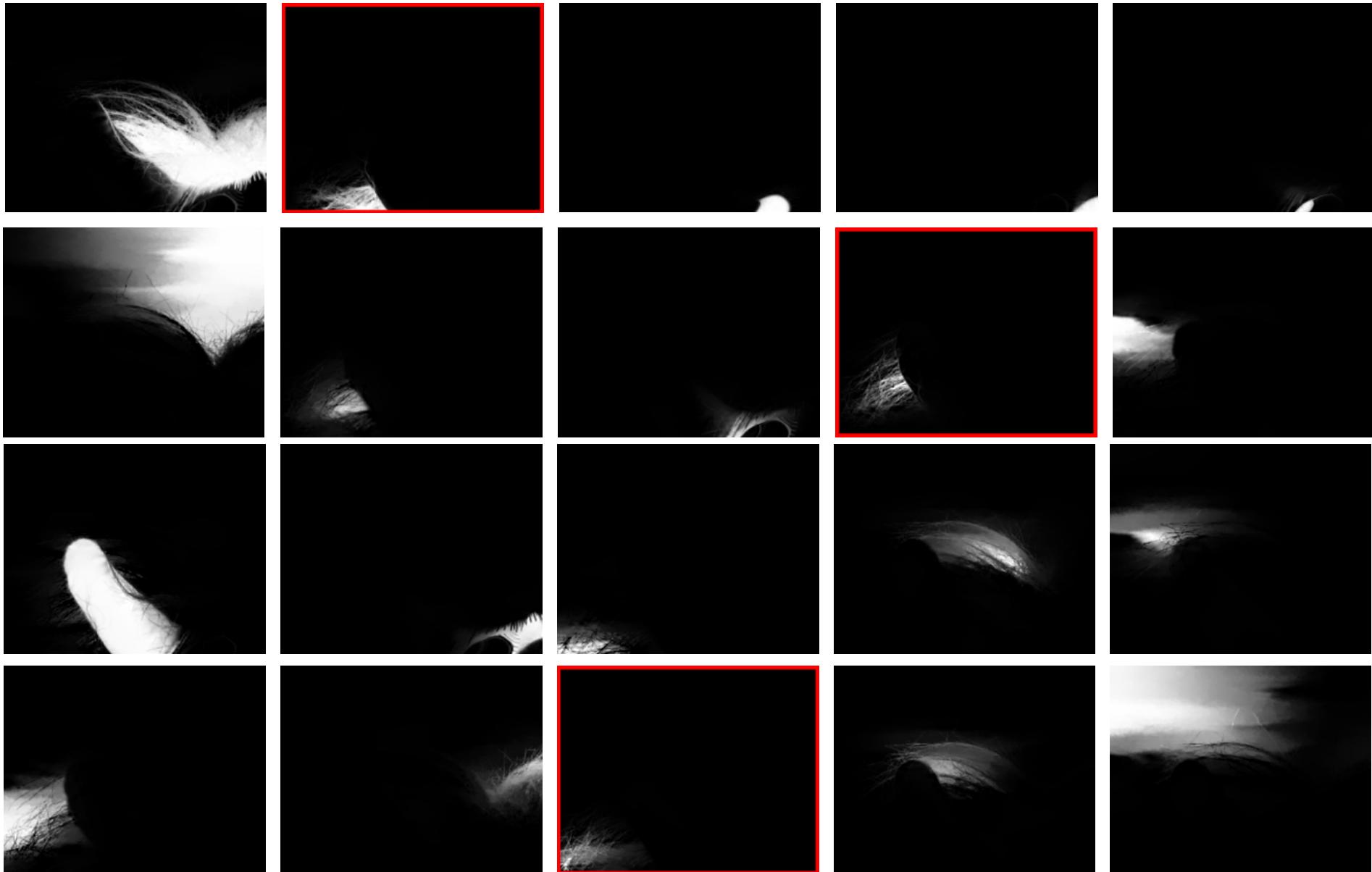
Components from trimap



Components picking



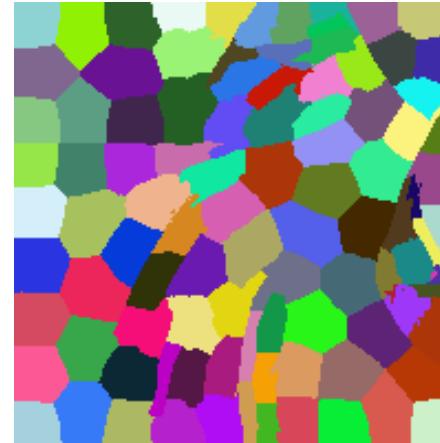
## Matting Components



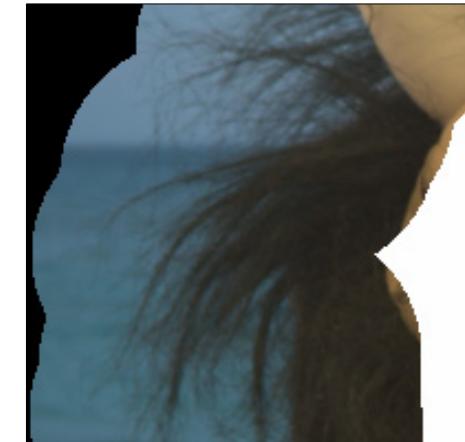
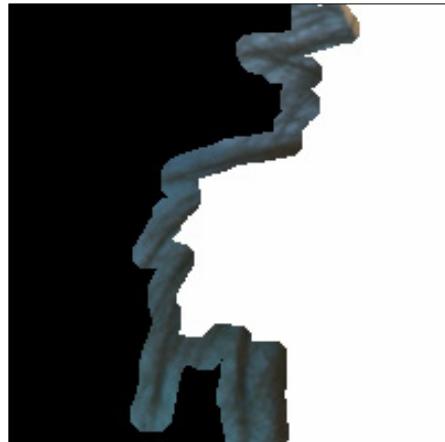
# Spectral Matting vs. Hard Segmentation



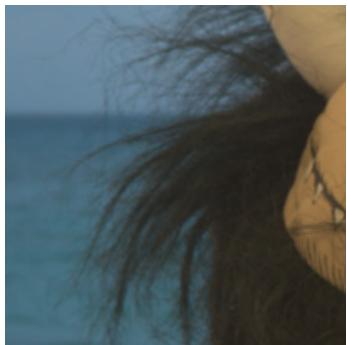
Input



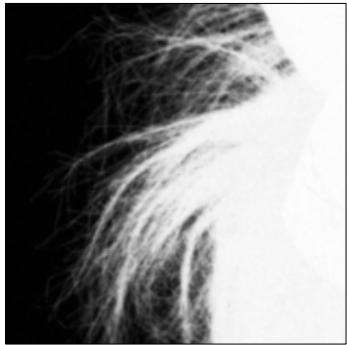
Automatic hard  
segments



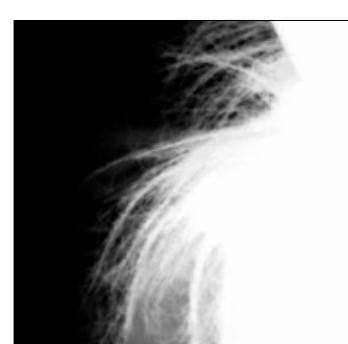
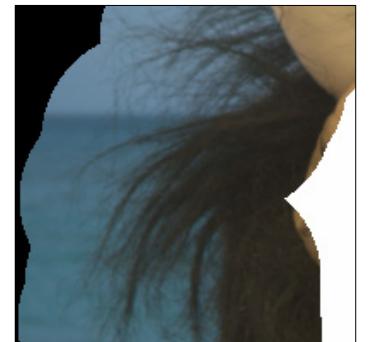
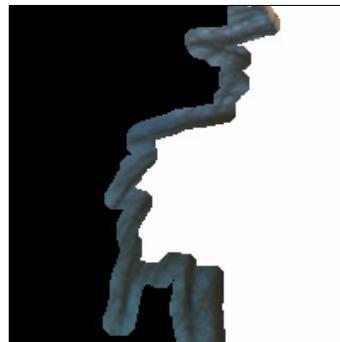
Automatic trimaps (eroding hard segmentation with different mask widths)



Input



Ground truth



Matte by picking  
components

Matte from automatic trimaps

## Spectral Matting vs. Hard Segmentation

# Limitations



Input



Ground truth



70 eigs approximation



400 eigs approximation