

Previous lecture

Texture Synthesis



Texture Transfer



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Data-driven methods: Texture 2 (Sz 10.5)



Many slides from Alexei Efros

Cs129 Computational Photography
James Hays, Brown, fall 2012

Image Analogies

Aaron Hertzmann^{1,2}

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Nuria Oliver²

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³**University of Washington**

Image Analogies



A



A'



B



B'



Blur Filter



Unfiltered source (A)



Filtered source (A')



Unfiltered target (B)

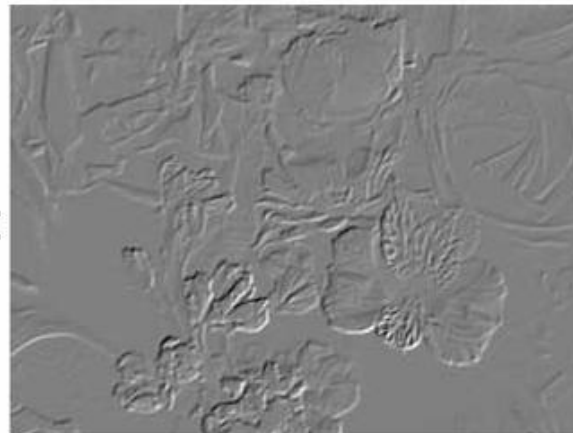


Filtered target (B')

Edge Filter



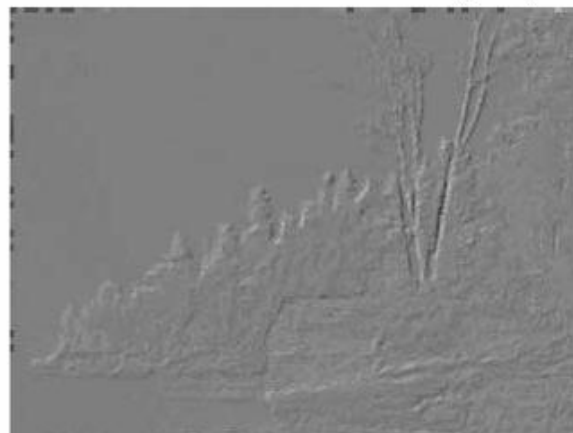
Unfiltered source (A)



Filtered source (A')



Unfiltered target (B)



Filtered target (B')

Artistic Filters



A



A'



B



B'

Colorization



Unfiltered source (A)

▪
▪



Filtered source (A')

▪ ▪
▪ ▪



Unfiltered target (B)

▪
▪



Filtered target (B')

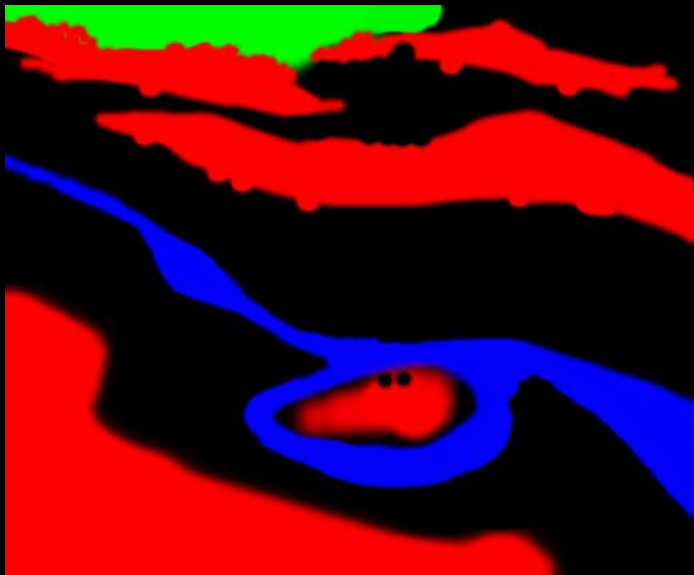
Texture-by-numbers



A



A'



B



B'

Super-resolution Input



A



A'

Super-resolution Result



B



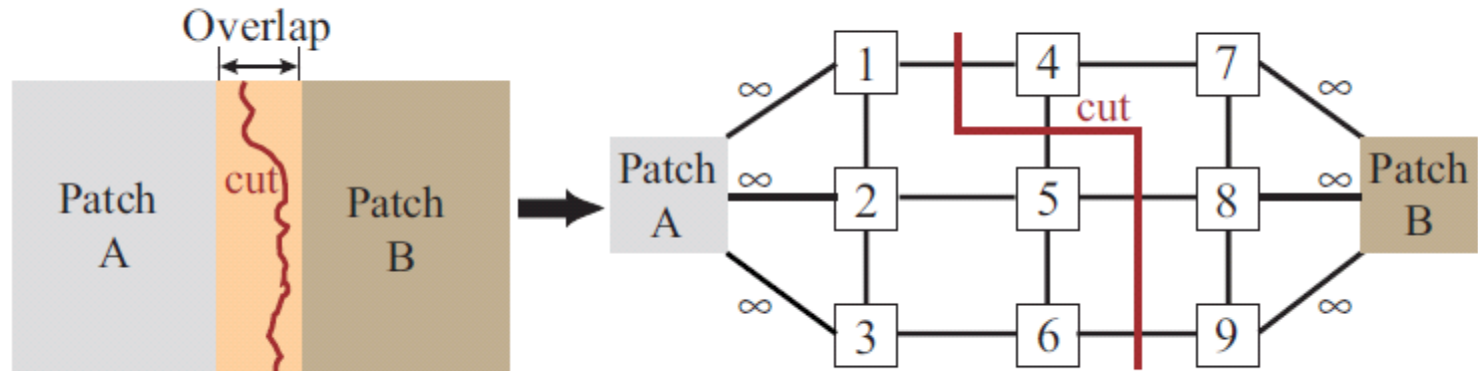
B'

Graphcut Textures: Image and Video Synthesis Using Graph Cuts

[Vivek Kwatra](#) , [Arno Schödl](#) , [Irfan Essa](#) , [Greg Turk](#) and [Aaron Bobick](#)

*To appear in Proc. ACM Transactions on
Graphics, [SIGGRAPH 2003](#)*

Graph cut vs Dynamic Programming



- What's the advantage of a graph cut over dynamic programming here?

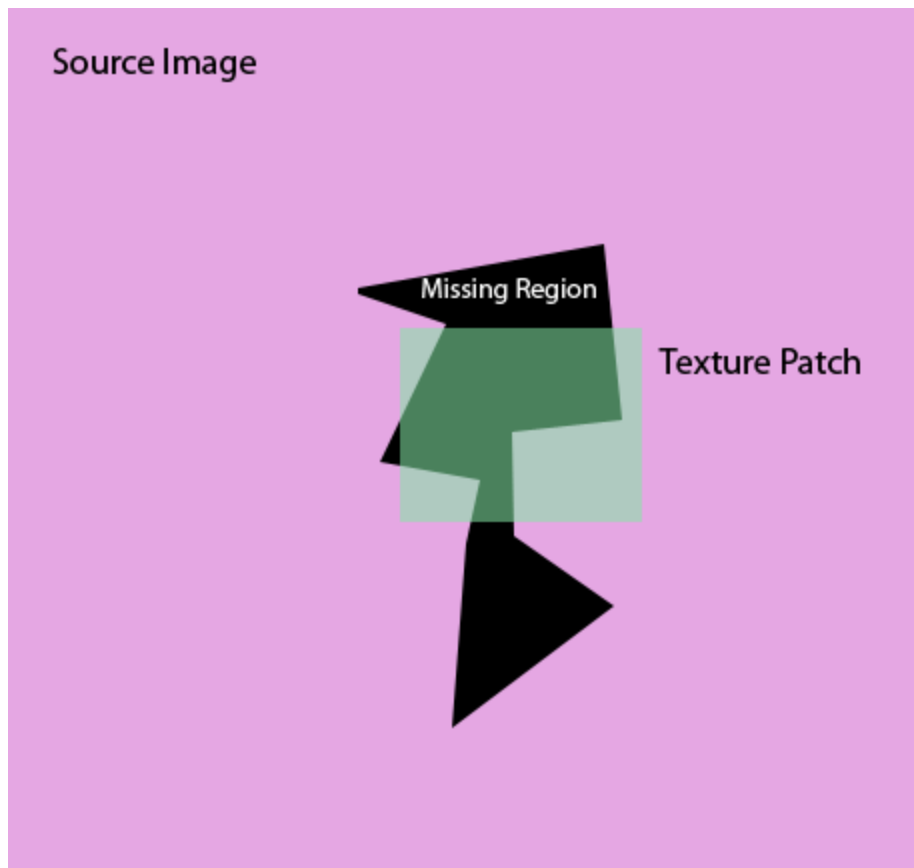
Source Image



Source Image

Missing Region

Texture Patch

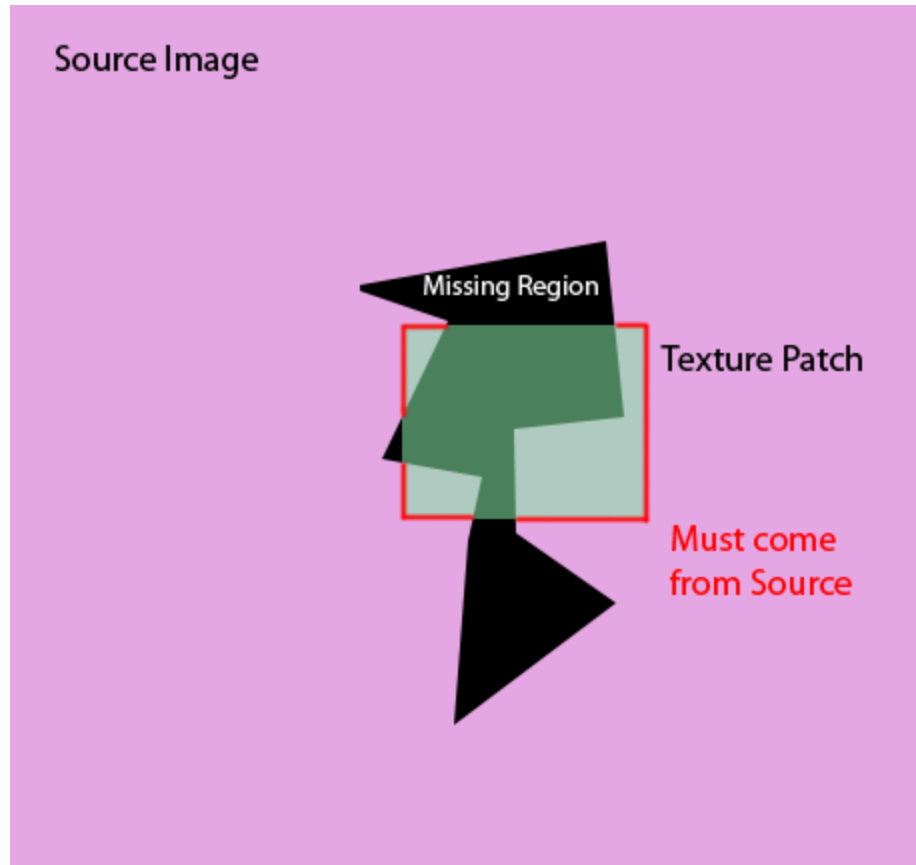


Source Image

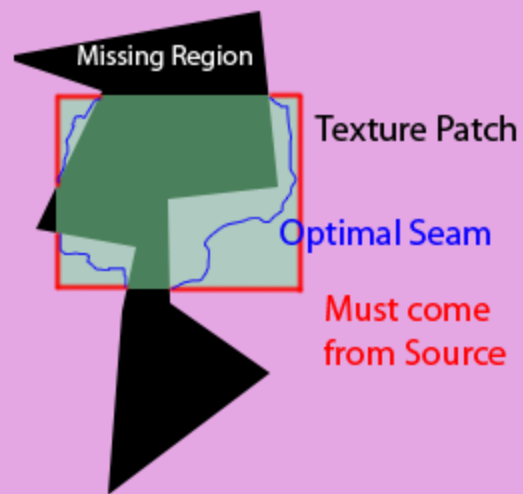
Missing Region

Texture Patch

Must come
from Source



Source Image



Scene Completion