SUPPLEMENTARY RESULTS

PERSONAL PHOTO ENHANCEMENT USING INTERNET PHOTO COLLECTIONS

TVCG submission
MORE RESULTS
(NOT SHOWN IN PAPER)
OUTLINE

• Comparison with Photoshop (Examples for user study)
• Automatic Segmentation
• Stereoscopic Conversion
• Field of View (FOV) Expansion
• Photometric Enhancement
• Geo-Tagging & Locating
COMPARISON WITH PHOTOSHOP

Ours VS Photoshop

Foreground segmentation
COMPARISON WITH PHOTOSHOP

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Foreground segmentation
COMPARISON WITH PHOTOSHOP

Cluttered scene with multiple layers Challenging!

Foreground segmentation

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Stereoscopic Conversion
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Ours

VS

Photoshop

Stereoscopic Conversion
COMPARISON WITH PHOTOSHOP

Ours VS Stereoscopic Conversion

Photoshop
COMPARISON WITH PHOTOSHOP

Ours VS Photoshop

FOV Expansion
COMPARISON WITH PHOTOSHOP

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Photometric Enhancement
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Photometric Enhancement
AUTOMATIC SEGMENTATION
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Image with bounding box for Grabcut (4th Column)
Background (red) color seeds
Foreground (blue) color seeds
Results of our automatic algorithm
Results of Grabcut
AUTOMATIC SEGMENTATION

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AUTOMATIC SEGMENTATION

Image with bounding box for Grabcut (4th Column)  
Background (red) color seeds  
Foreground (blue) color seeds  
Results of our automatic algorithm  
Results of Grabcut
STEREOSCOPIC CONVERSION
STEREOSCOPIC CONVERSION

Original Image

3D depth map

Stereo: Red-Cyan Anaglyph
STEREOSCOPIC CONVERSION

Original Image

Stereo: Red-Cyan Anaglyph
STEREOSCOPIC CONVERSION

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Original Image

Stereo: Red-Cyan Anaglyph

Multiple layers
Heavier manual work
STEREOSCOPIC CONVERSION

Original Image

Stereo: Red-Cyan Anaglyph

Multiple layers
Heavier manual work
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Original Image

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STEREOSCOPIC CONVERSION

Original Image

Stereo: Red-Cyan Anaglyph
FOV EXPANSION
FOV EXPANSION

Original Image

FOV Expanded
FOV EXPANSION

Original Image

FOV Expanded
FOV EXPANSION

Original Image

FOV Expanded
FOV EXPANSION

Content aware resizing case

Original Image

FOV Expanded
FOV EXPANSION

Original Image

FOV Expanded
FOV EXPANSION

Original Image

FOV Expanded
PHOTOMETRIC ENHANCEMENT
PHOTOMETRIC ENHANCEMENT
SATURATION REMOVAL (OVER-EXPOSURE)

Original Image with automatically detected over-exposure regions

Result from Photoshop color adjustment tools

Our result

Automatically detected!
PHOTOMETRIC ENHANCEMENT
SATURATION REMOVAL (OVER-EXPOSURE)

Our result

Automatically detected!
GEO-TAGGING & LOCATING

Global dataset tags: Berlin, Germany, Deutschland, Europe, Art.
THANKS!