

Deciduous tree

Through My Own Mind's Eye

KONDO Kunio

CG Works No.4

2007-2020



Deciduous tree

Through My Own Mind's Eye

KONDO Kunio

CG Works No.4

2007-2020



繋がり: Shake hands
Kenichi KONDO
2005

Contents

1. Non Photorealistic Rendering
2. CG Animation

published April 30, 2020

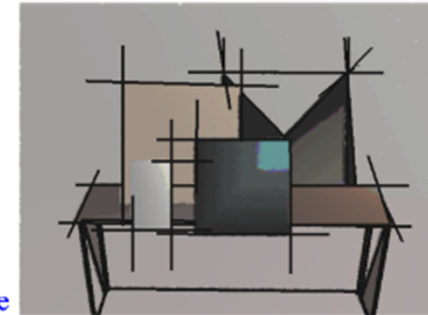
1. Non Photorealistic Rendering

Painting Styles Based on Visual Perception, T. Yoneyama, E. Genda, K. Kondo, 2007

	<p>• Multi-viewpoint</p>		<p>• Feature Extraction • Contour • Limited Color • Contrast Reduction</p>
	<p>• Saturation Reduction</p>		<p>• Pointillism • Oversimplification</p>

Takashi Yoneyama, Etsuo Genda, Kunio Kondo, Proposal of Image Generation Methods based on the Process of Visual Information Processing, Proc. of ADADA, 2007

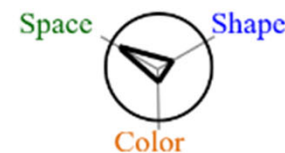
Vision-Based Painterly Image Synthesis, T. Yoneyama, E. Genda, K. Kondo, 2009



- Transformation
- Simplification
- Outline
- Color reduction



- Shape simplification
- Feature Extraction



- Shape simplification
- Contour Extraction
- Feature Extraction

Artistic Rendering, T. Yoneyama, E. Genda, K. Kondo, 2009

- Using fixed points for the wall of building model

Real time Rendering



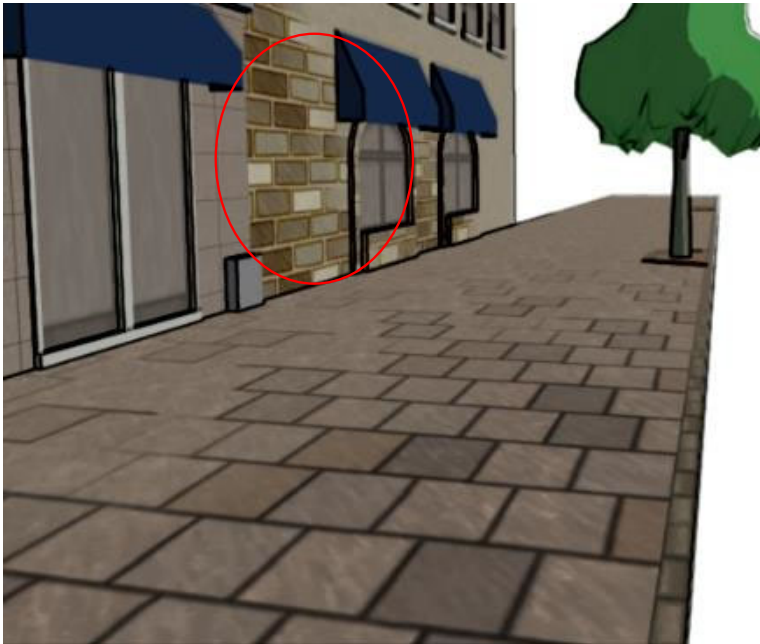
Example1 (Close view)



Example2 (Distant view)

Artistic Rendering, T. Yoneyama, E. Genda, K. Kondo, 2009

- Using specific vectors for the sidewalk model

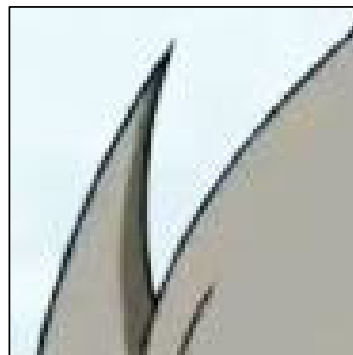
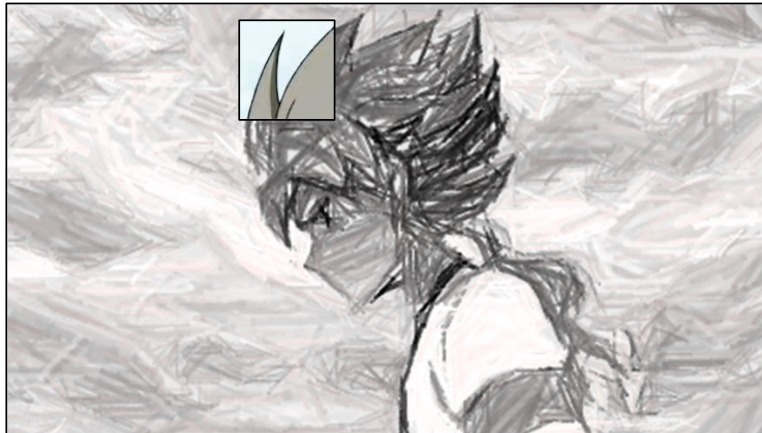


Example1



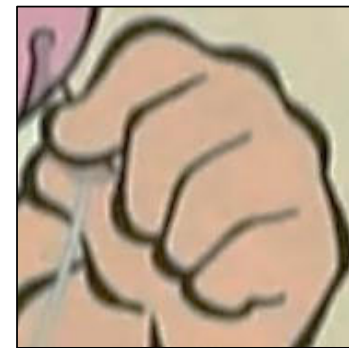
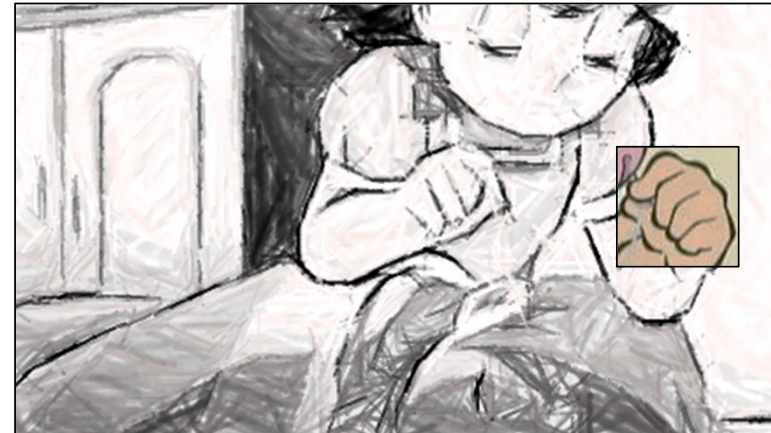
Example2

Shape Oriented Line Drawing, T. Matsuo, K. Mikami, T.Watanabe, K. Kondo,2009



outline

(c)LEVEL-5/FCイナズマイレブン GO MOVIE 2011



Outline with Variable width

(c)藤子プロ・小学館・テレビ朝日・シンエイ・ADK

Takashi Matsuo Koji Mikami Taichi Watanabe Kunio Kondo "Shape Oriented Line Drawing in Real-Time 3DCG" SIGGRAPH ASIA 2011, 2011.

Shape Oriented Line Drawing, T. Matsuo, K. Mikami, T.Watanabe, K. Kondo,2009

Real-Time 3DCG

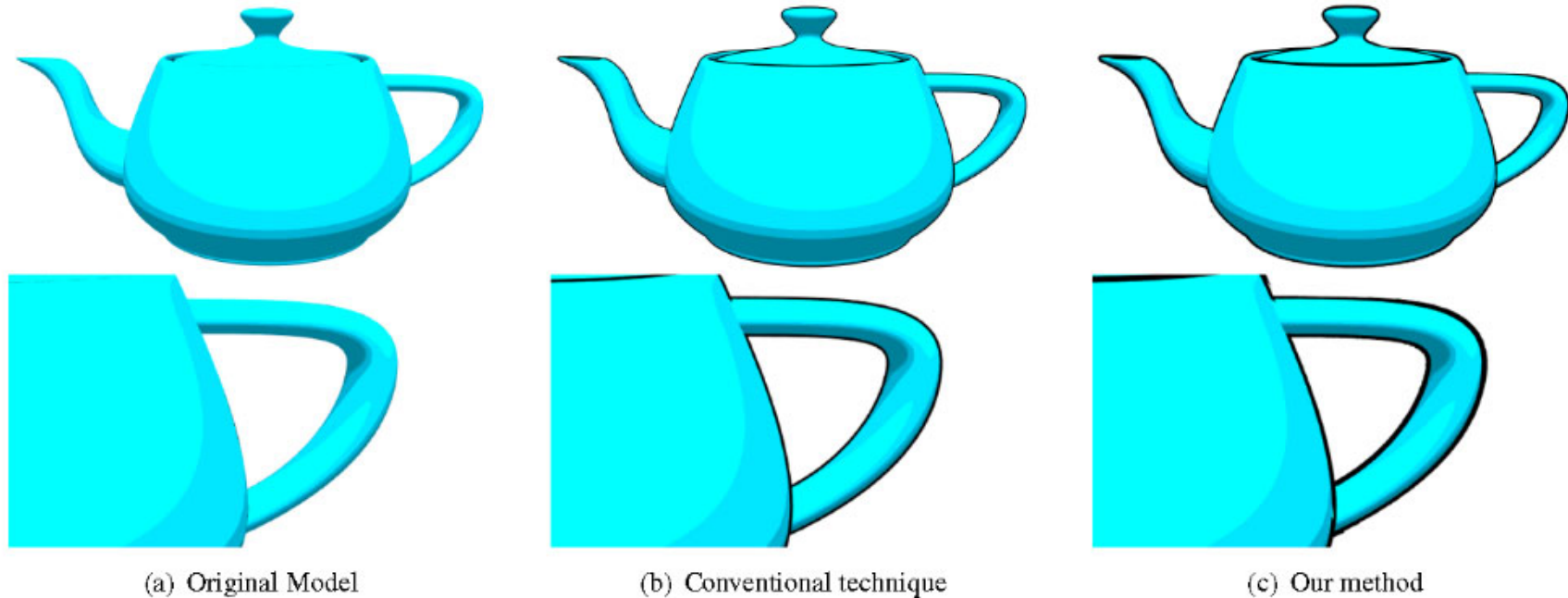
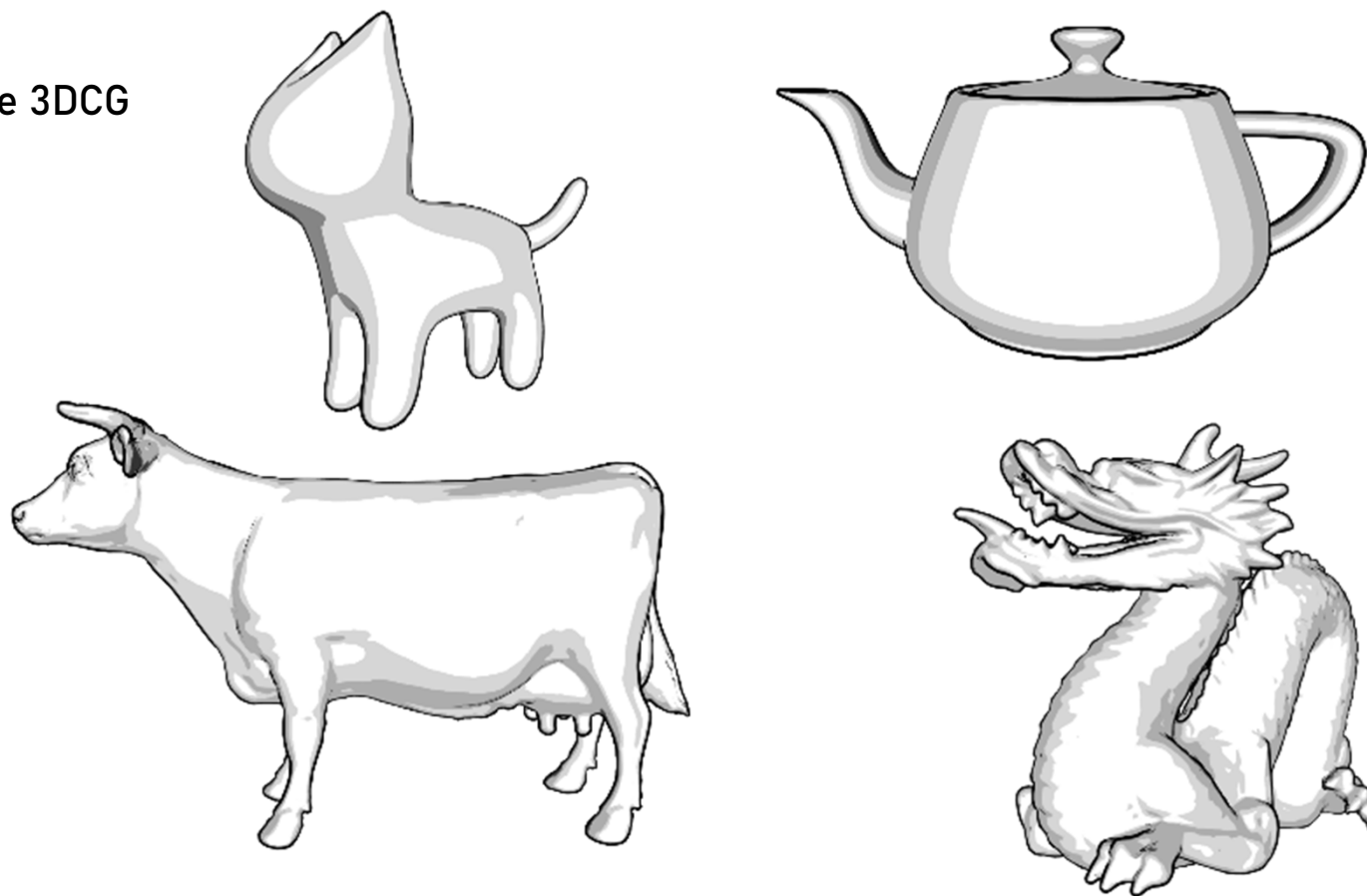


Figure 1: *Comparing rendering techniques*

Takashi Matsuo Koji Mikami Taichi Watanabe Kunio Kondo "Shape Oriented Line Drawing in Real-Time 3DCG" SIGGRAPH ASIA 2011, 2011.

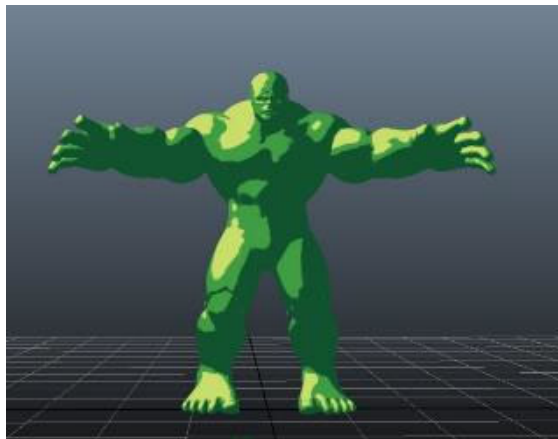
Shape Oriented Line Drawing, T. Matsuo, K. Mikami, T.Watanabe, K. Kondo,2009

Real-Time 3DCG



Takashi Matsuo Koji Mikami Taichi Watanabe Kunio Kondo "Shape Oriented Line Drawing in Real-Time 3DCG" SIGGRAPH ASIA 2011, 2011.

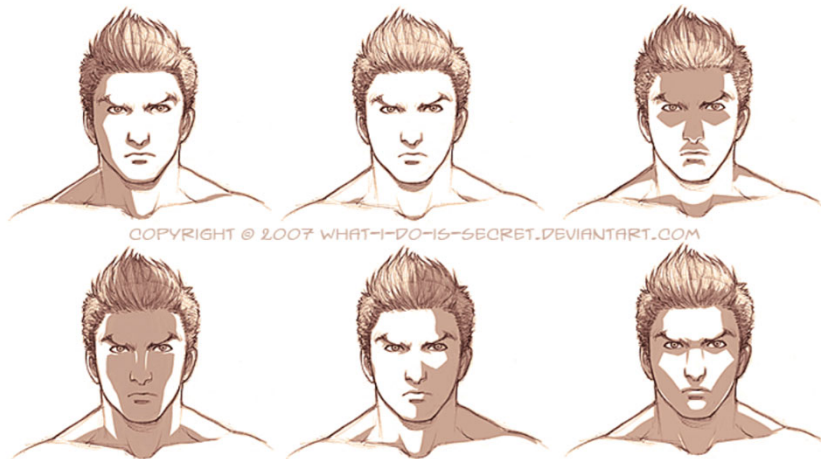
Stylized Shading, Muhammad Arief, Hideki Todo, Kunio Kondo, 2014



Muhammad Arief, Hideki Todo, Kunio Kondo, Koji Mikami, Yasushi Yamaguchi, Practical Region Control in Projective Texture for Stylized Shading, SIGGRAPH Asia 2014 Poster, 2014.12

Stylized Shading, Muhammad Arief, Hideki Todo, Kunio Kondo, 2014

Radial Transformation in Texture Projection for Stylized Shading Region Control



Artistic shading shape in 2D Artwork. The shading over the eyes and the nose give mysterious feeling to the character



Painting Interface Result.

The first row shows the shade before the painting operation and the second row shows shading after painting operation.

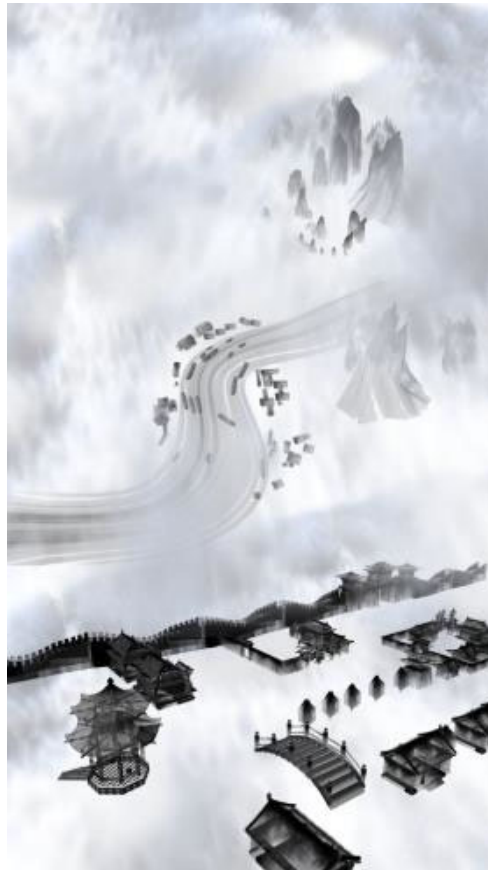
Multi Projection Method for India-ink Painting, Lai LI, T. ISHIKAWA, K. Kondo,2009



Lai LI, Tomokazu ISHIKAWA, Koji MIKAMI, Masanori KAKIMOTO, Kunio KONDO, Multi Projection Method for India-ink Painting by Computer Graphics, Journal of Graphic Science of Japan, Volume 49 Issue 2 Pages 13-20, 2015

Multi Projection Method for India-ink Painting, Lai LI, T. ISHIKAWA, K. Kondo,2009

Perspective projection



Multi projection



Lai LI, Tomokazu ISHIKAWA, Koji MIKAMI, Masanori KAKIMOTO, Kunio KONDO, Multi Projection Method for India-ink Painting by Computer Graphics, Journal of Graphic Science of Japan, Volume 49 Issue 2 Pages 13-20, 2015

Multi Projection Method for India-ink Painting, Lai LI, T. ISHIKAWA, K. Kondo,2009

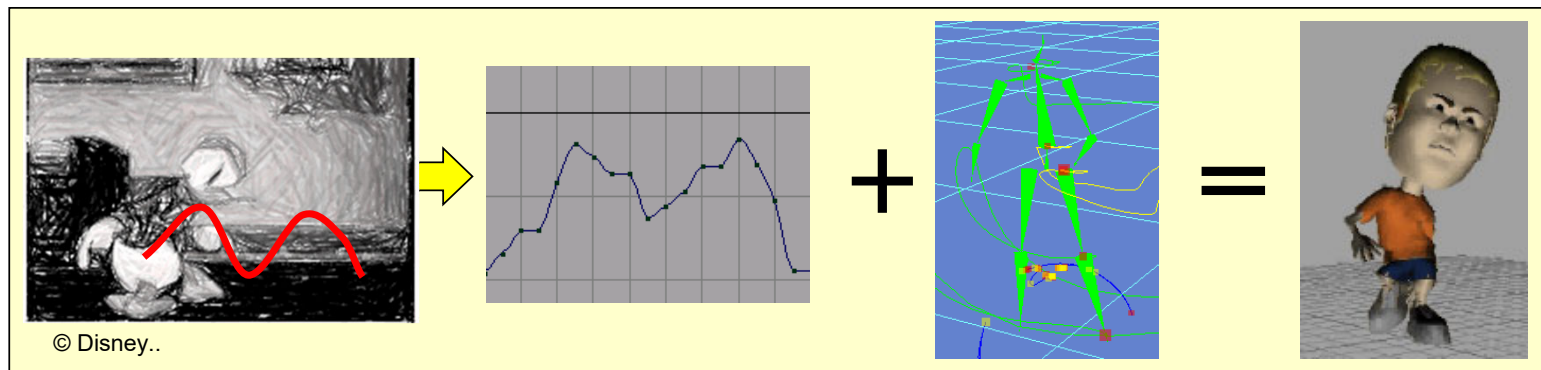


Lai LI, Tomokazu ISHIKAWA, Koji MIKAMI, Masanori KAKIMOTO, Kunio KONDO, Multi Projection Method for India-ink Painting by Computer Graphics, Journal of Graphic Science of Japan, Volume 49 Issue 2 Pages 13-20, 2015

2. CG Animation

Mixing method of Exaggerated action, Y. Mizuguchi, M. KAWASHIMA, K.Kondo,2009

Mixing data from Animation and Motion Capture



Easier animation making

Better expression of motion captured animation

Easier method based on knowledge of 2D animation Making

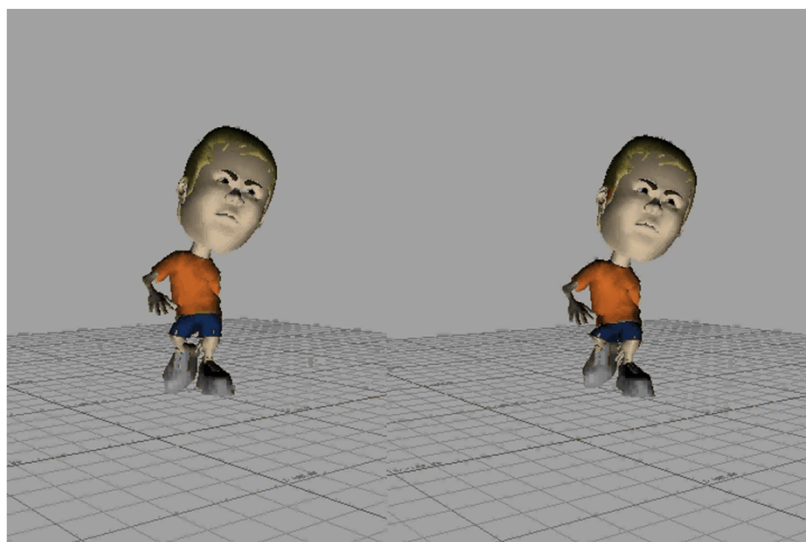
Yasuyuki MIZUGUCHI, Kunio KONDO, Motonobu KAWASHIMA, Koji Mikami, Mitsuru KANEKO, Mixing method of Exaggerated action from Animation and Motion Capture, Visual Computing 2008

Mixing method of Exaggerated action, Y. Mizuguchi, M. KAWASHIMA, K.Kondo,2009



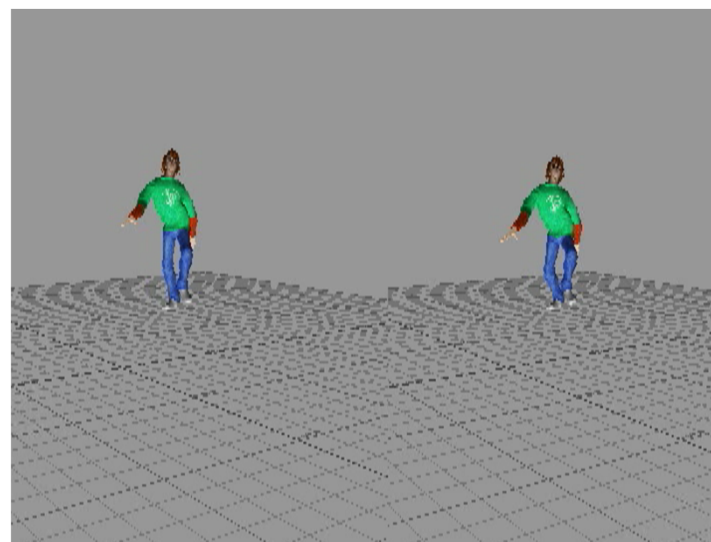
Exaggerated action learned from Animation

Example of Double Bounce



Original motion

Add our Proposed method

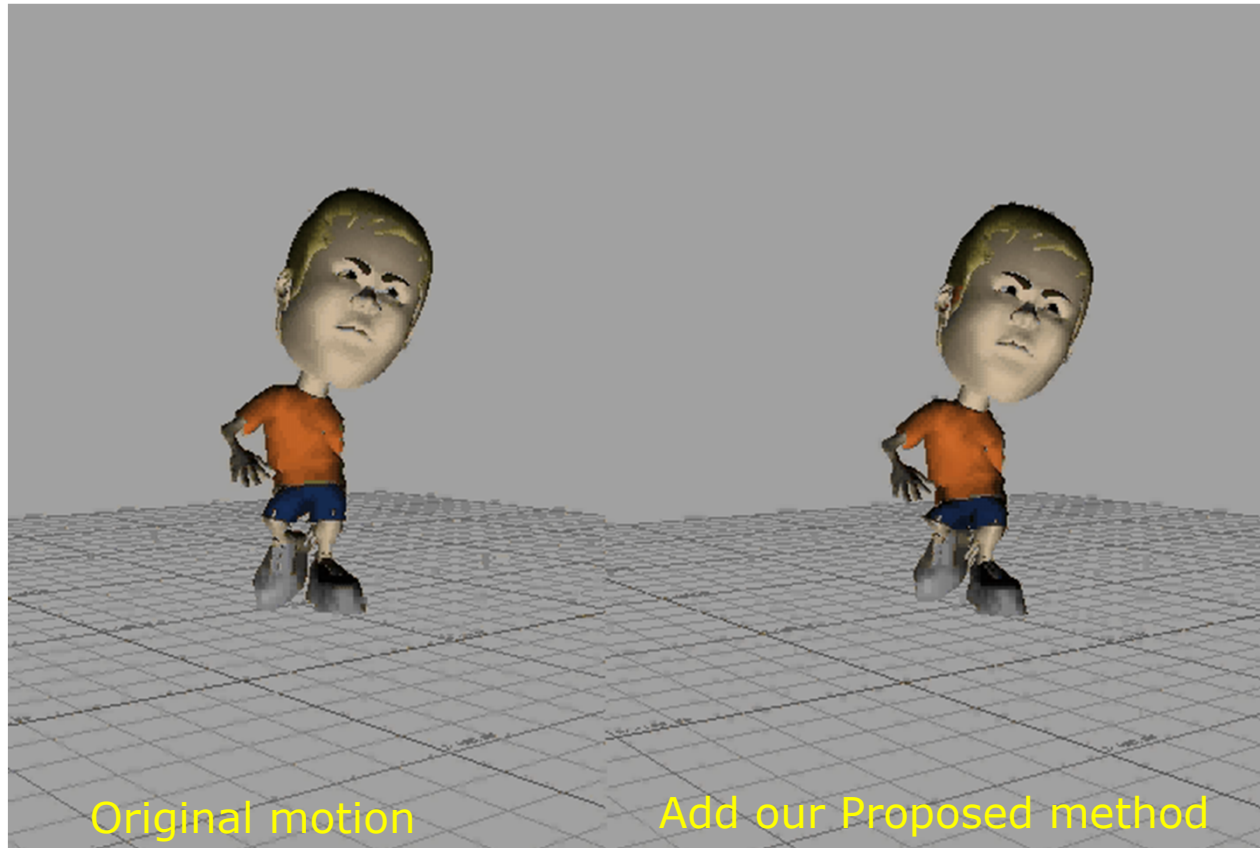


Original motion

Add our Proposed method

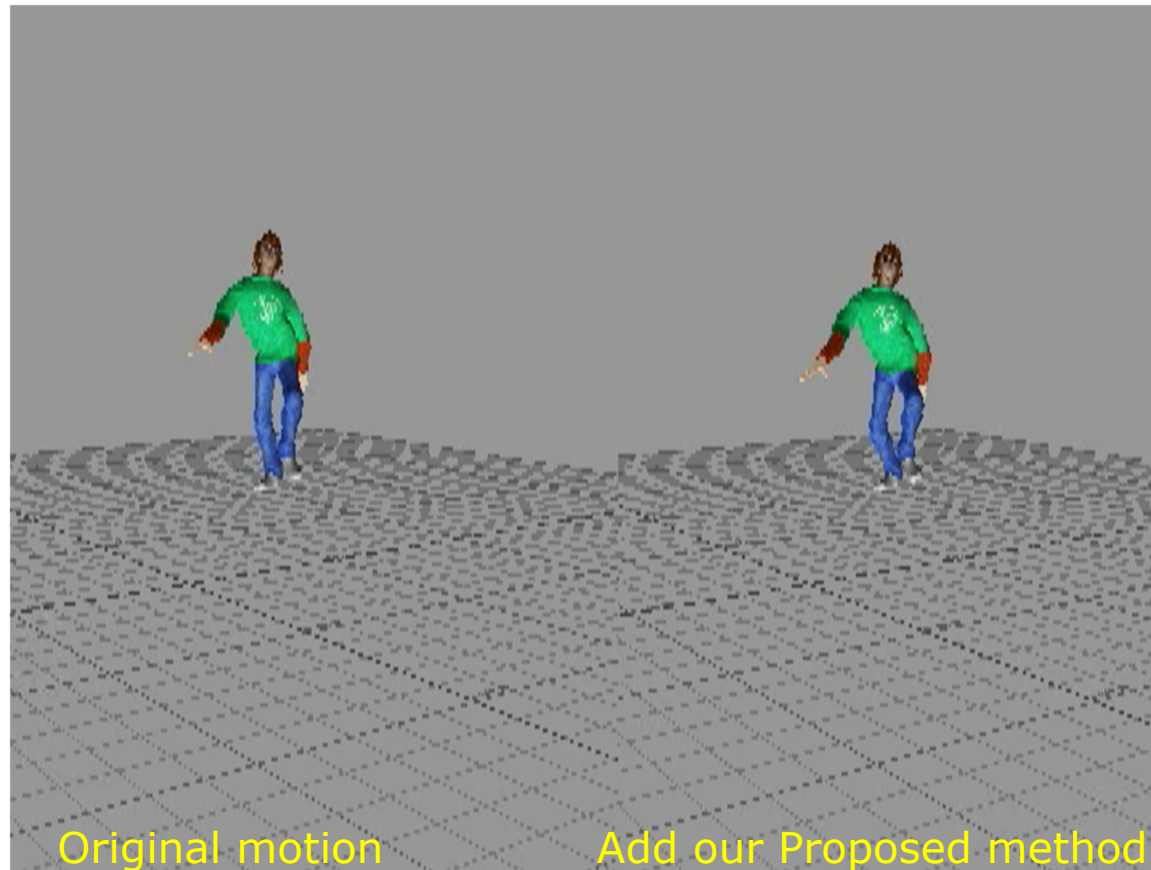
Yasuyuki MIZUGUCHI, Kunio KONDO, Motonobu KAWASHIMA, Koji Mikami, Mitsuru KANEKO, Mixing method of Exaggerated action from Animation and Motion Capture, Visual Computing 2008

Mixing method of Exaggerated action, Y. Mizuguchi, M. KAWASHIMA, K.Kondo,2009



Yasuyuki MIZUGUCHI, Kunio KONDO, Motonobu KAWASHIMA, Koji Mikami, Mitsuru KANEKO, Mixing method of Exaggerated action from Animation and Motion Capture, Visual Computing 2008

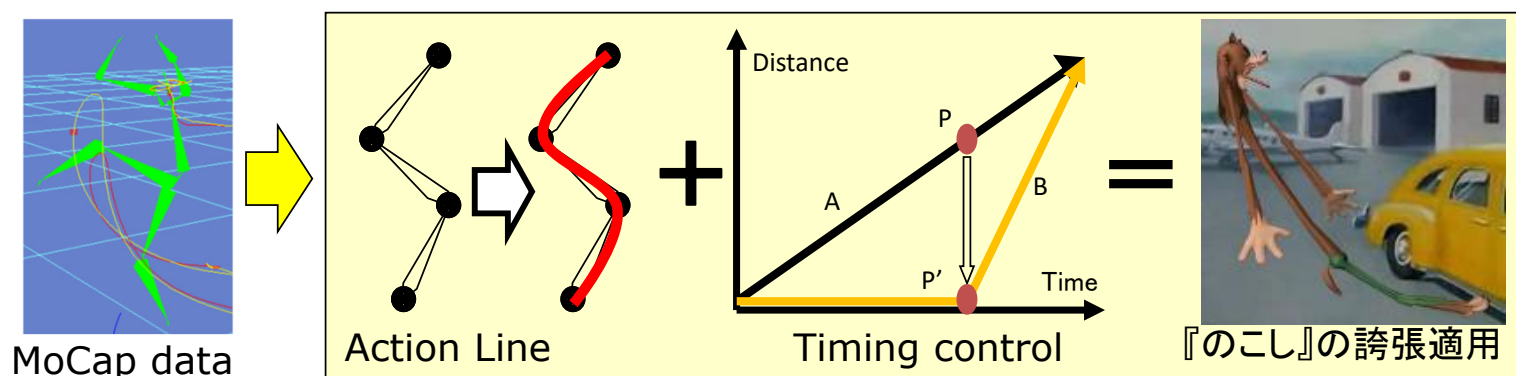
Mixing method of Exaggerated action, Y. Mizuguchi, M. KAWASHIMA, K.Kondo,2009



Yasuyuki MIZUGUCHI, Kunio KONDO, Motonobu KAWASHIMA, Koji Mikami, Mitsuru KANEKO, Mixing method of Exaggerated action from Animation and Motion Capture, Visual Computing 2008

Stretch Expression for Motion Capture, T. Kitagawa, M. KAWASHIMA, K.Kondo,2009

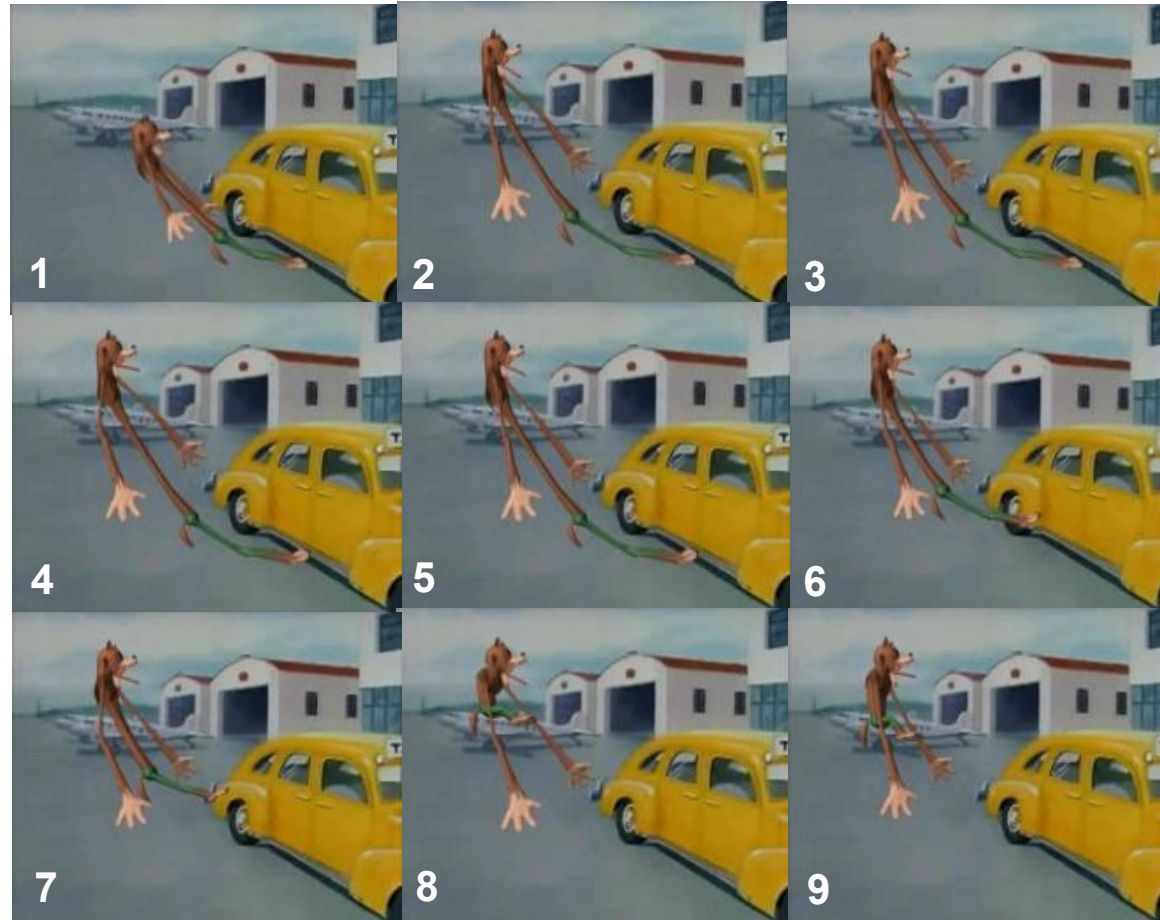
Animation with Stretch



Outline of Stretch method

- Making an Action line using a spline curve
- Making Stretch by timing control

Stretch Expression for Motion Capture, T. Kitagawa, M. KAWASHIMA, K.Kondo,2009



Tetsu Kitagawa, Kunio Kondo, Motonobu Kawashima, Koji Mikami, Mitsuru Kaneko, Stretch Expression for Motion Capture Data Using Action Lines, NICOGRAPH 2009 Spring conference, 2009.3

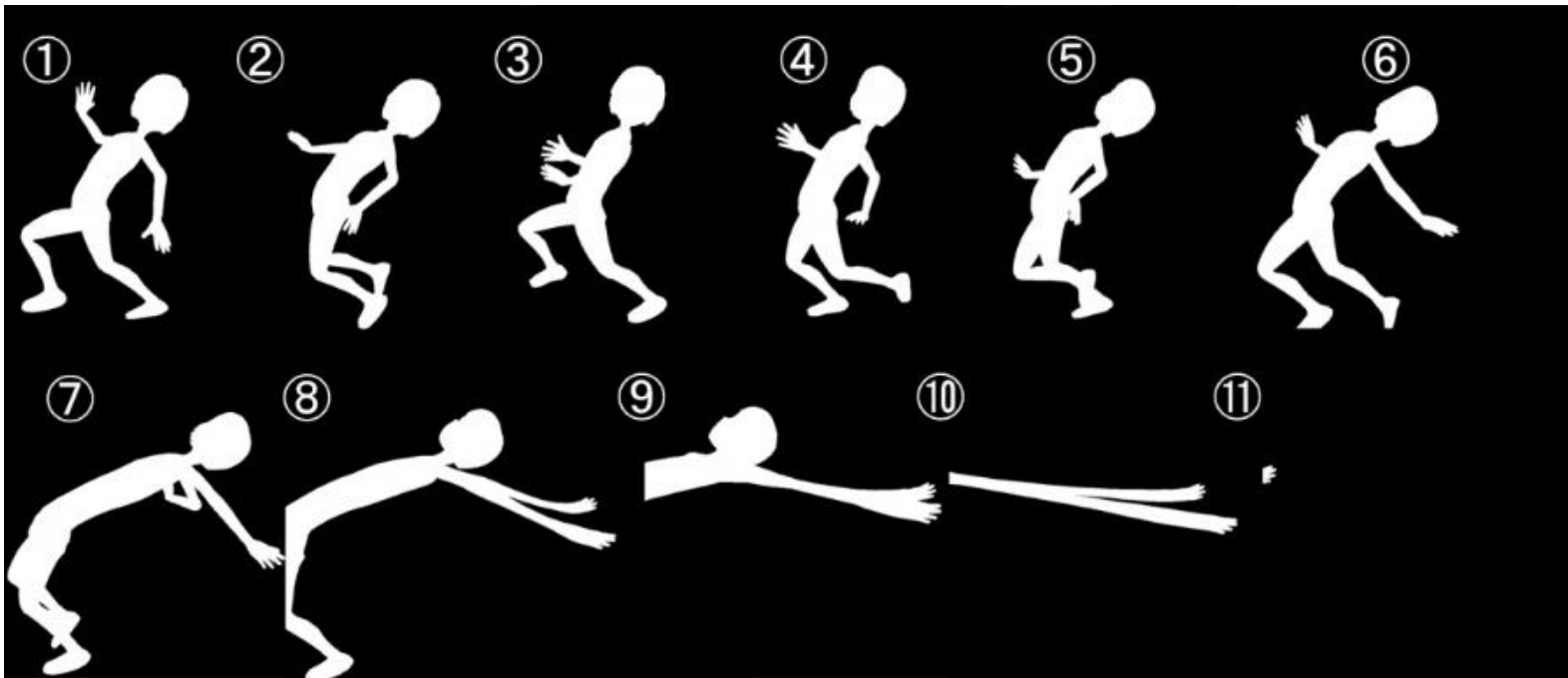
Stretch Expression for Motion Capture, T. Kitagawa, M. KAWASHIMA, K.Kondo,2009

Stretch using an Action Line



Tetsu Kitagawa, Kunio Kondo, Motonobu Kawashima, Koji Mikami, Mitsuru Kaneko, Stretch Expression for Motion Capture Data Using Action Lines, NICOGRAPH2009 Spring conference, 2009.3

Stretch Expression of Character Animation, M. KAWASHIMA, K.Kondo,2009



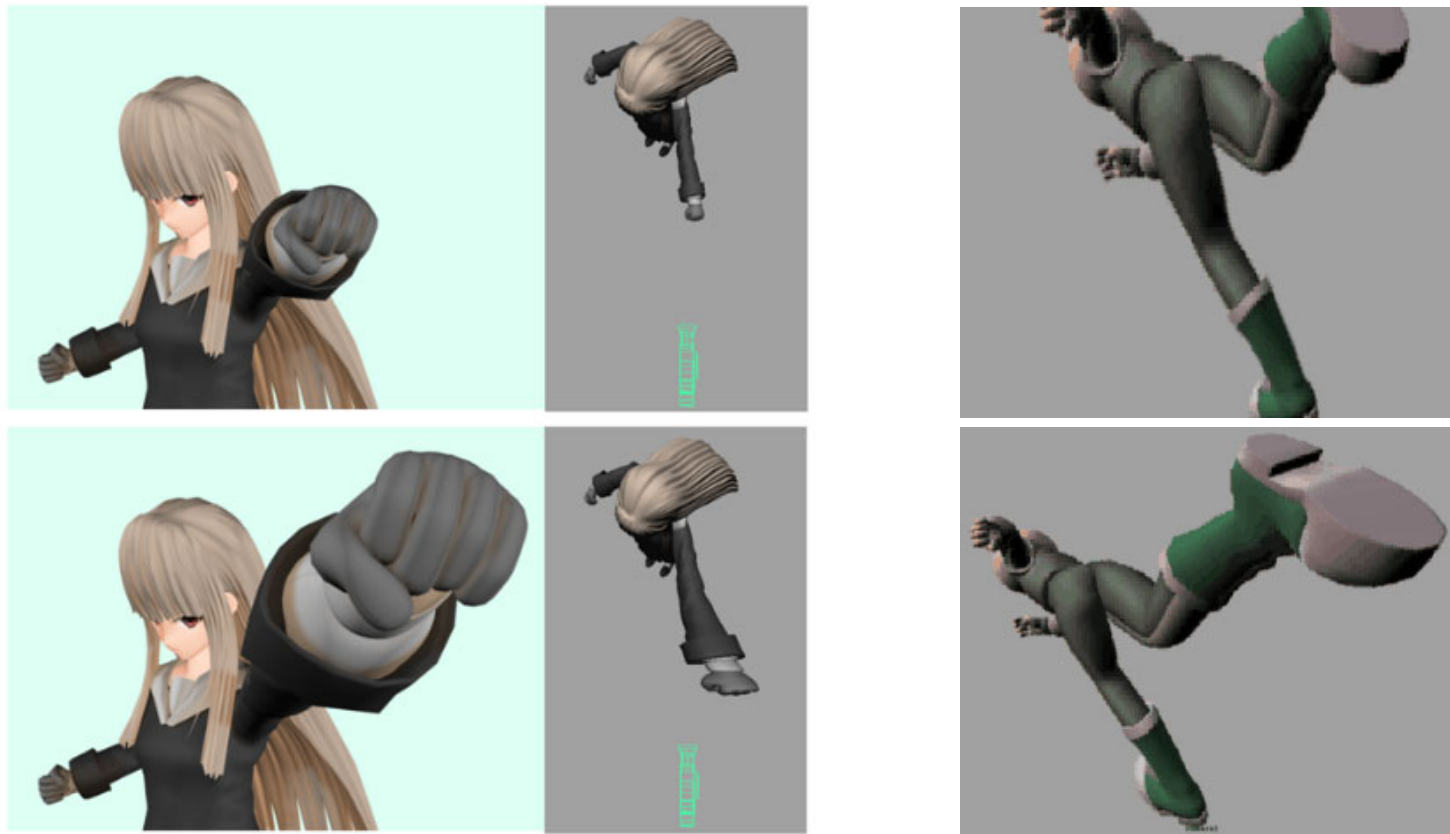
Motonobu Kawashima, Takuya Omori, Kunio Kondo, Koji Mikami, Wataru Matsushima, Stretch Expression of Character Animation using Motion Capture Data, Visual Computing 2011, 2011

Stretch Expression of Character Animation, M. KAWASHIMA, K.Kondo,2009



Motonobu Kawashima, Takuya Omori, Kunio Kondo, Koji Mikami, Wataru Matsushima, Stretch Expression of Character Animation using Motion Capture Data, Visual Computing 2011, 2011

Anime Pers. of 3DCG Character, K. Hosada, M. Kawashima, K.Kondo,2009.3



K. Hosada, M. Kawashima, K.Kondo, Anime Pers. of 3DCG Character, Anime Fair, 2009.3

Anime Pers. of 3DCG Character, K. Hosada, M. Kawashima, K.Kondo,2009.3

Perspective method

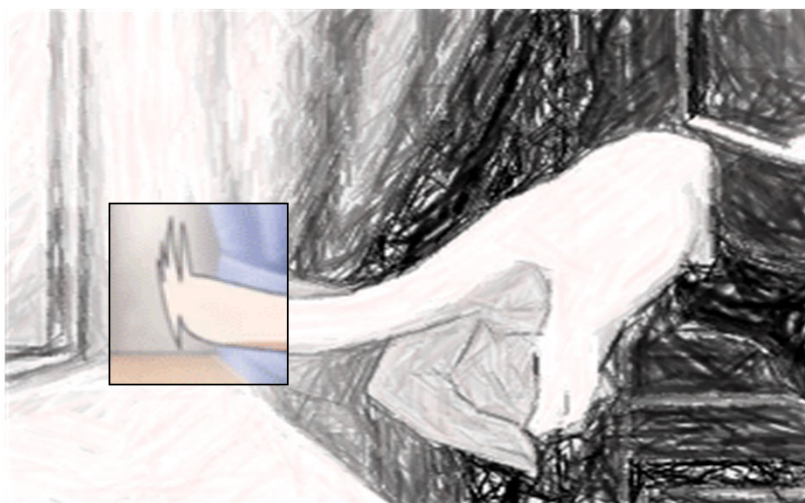
Our Exaggerated Perspective method



K. Hosada, M. Kawashima, K.Kondo, Anime Pers. of 3DCG Character, Anime Fair, 2009.3

Real-time CG using Cartoon Blur, WANG yilong, Koji MIKAMI, Kunio KONDO ,2016.2

Animation with Cartoon Blur



Our proposed method



『未確認で進行形』

© 荒井チェリー/一迅社未確認で進行形製作委員会

WANG yilong, Koji MIKAMI, Kunio KONDO , Real-time CG using Cartoon Blur method, Proceedings of 2015 Annual Conference, Digital Games Research Association JAPAN, 2016.2

Real-time CG using Cartoon Blur, WANG yilong, Koji MIKAMI, Kunio KONDO ,2016.2

- Simultaneous drawing of blur and outline is needed
- Real-time processing of model deformation and Outline drawing



Real-time Outline blur

WANG yilong, Koji MIKAMI, Kunio KONDO , Real-time CG using Cartoon Blur method, Proceedings of 2015 Annual Conference, Digital Games Research Association JAPAN, 2016.2

Real-time CG using Cartoon Blur, WANG yilong, Koji MIKAMI, Kunio KONDO ,2016.2



Number of Blur: 80 parameter (length:0.1 Outline:0.1 Distortion thickness 1.2 Smoothing Iteration 6)

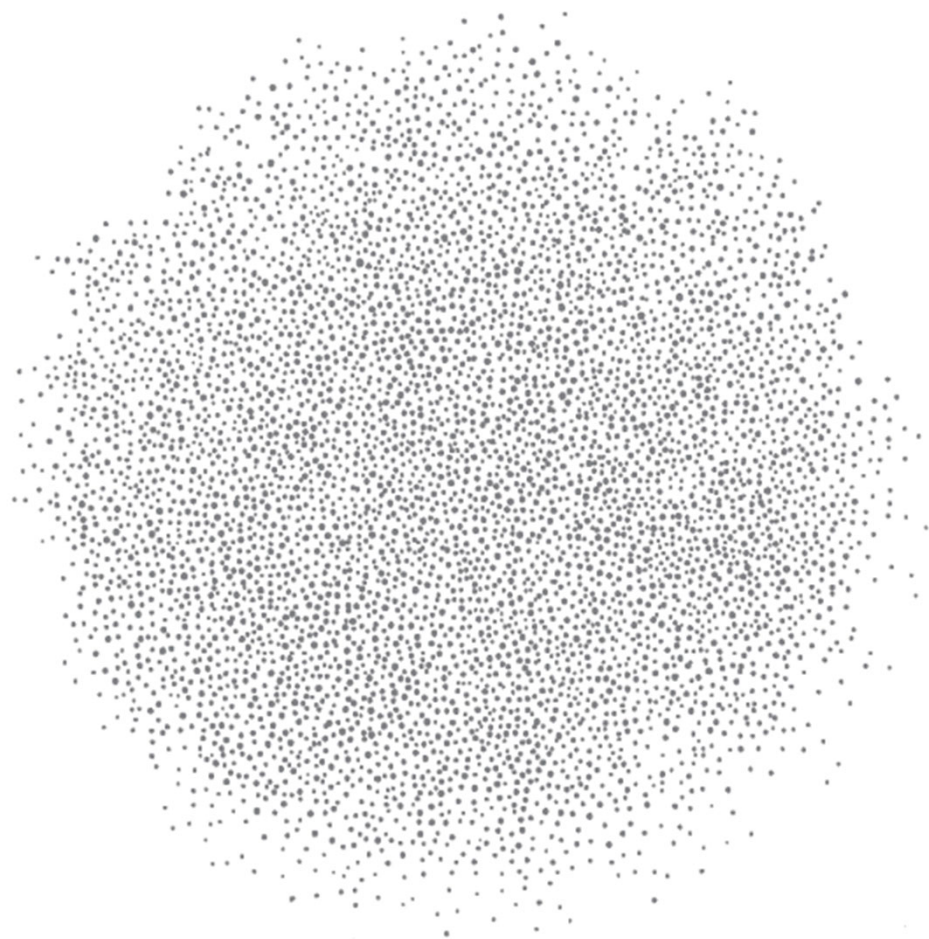
WANG yilong, Koji MIKAMI, Kunio KONDO , Real-time CG using Cartoon Blur method, Proceedings of 2015 Annual Conference, Digital Games Research Association JAPAN, 2016.2

Real-time CG using Cartoon Blur, WANG yilong, Koji MIKAMI, Kunio KONDO ,2016.2



Number of Blur:120 parameter (length:0.3 Outline:0.1 Distortion thickness 3.0 Smoothing Iteration 6)

WANG yilong, Koji MIKAMI, Kunio KONDO , Real-time CG using Cartoon Blur method, Proceedings of 2015 Annual Conference, Digital Games Research Association JAPAN, 2016.2



晴天の星空。
Lovely Stars in the bright sky
Masashi KONDO

晴天の空を眺めてもそこに星を見つけることはできないが、見えていないだけで、星は輝いている。
目には見えないけれど、存在する世界を見てほしい。 Cyberworlds 2013