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LUCA SCHOOL OF ARTS

- University of Ostrava

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Koji Mikami, Kunio Kondo

Motonobu Kawashima, Kazuo Sasaki, Hirokazu Yasuhara, Akinori Ito, Takashi Ohta, Taichi Watanabe

STUDENTS TEAM

1. Scifi_wabisabi : Motonobu Kawashima

Robin Mariančík(Czech. R) u20017@student.osu.cz

Michal Náhlík(Czech. R) u20018@student.osu.cz

2. Character-making : Kunio Kondo, Kazuo Sasaki

Helana Chojnacka(Poland) hehehelios22@gmail.com

Olesia Chirkovskaiao(Czech. R) U19070@student.osu.cz

Sabina Akhmetova(Czech. R) u19086@student.osu.cz ,

Botakoz Temirkhan (Czech. R) u19075@student.osu.cz

3. Game and Sound Design : Hirokazu Yasuhara, Akinori Ito, Koji Mikami

Matthew Kounechongprasert(USA) Z1825302@students.niu.edu

Romane Rakotovao(TUT exchange students from France)

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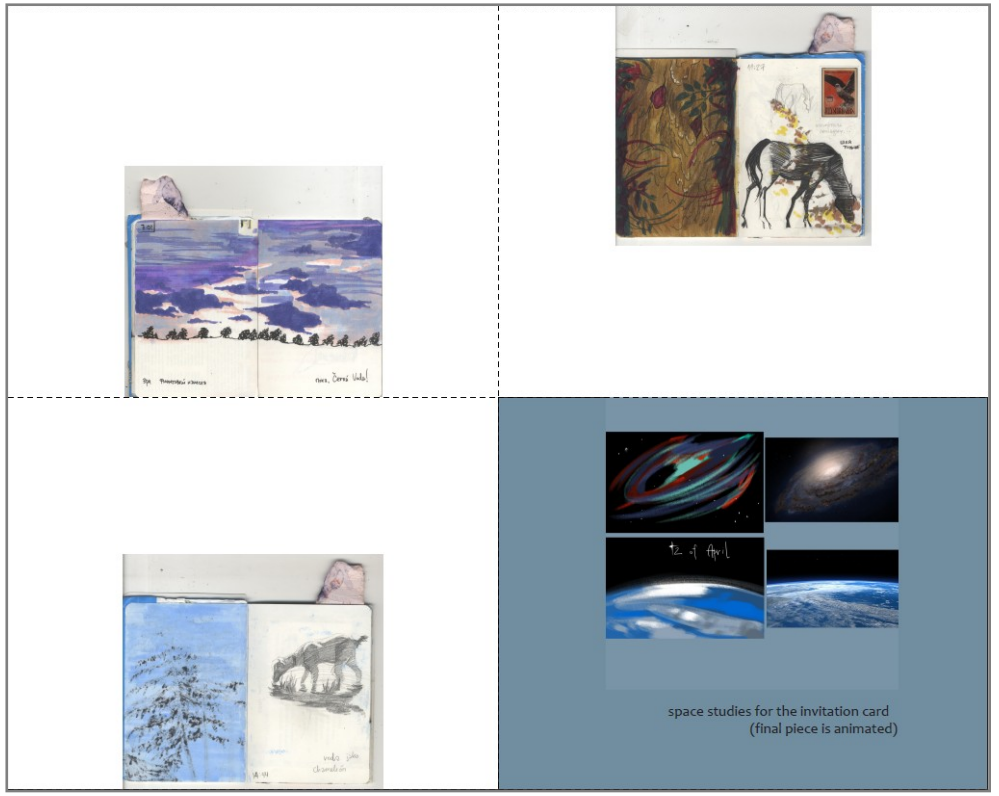
Enhancement of User Experience and Sustainable Game Development

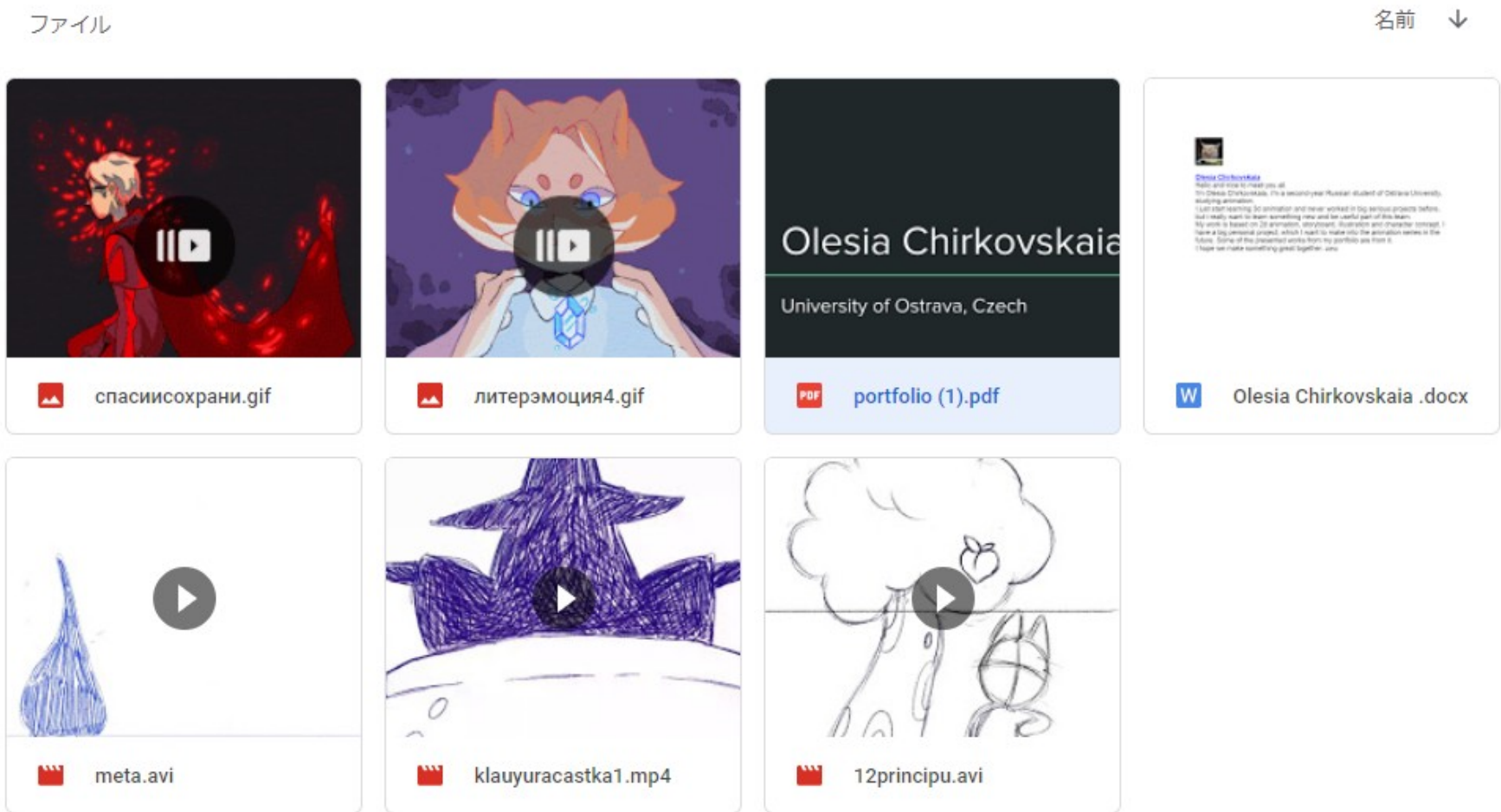
・Research for...

Efficient Character Making (Kunio Kondo)
Innovative Game Design (Koji Mikami, Hirokazu Yasuhara)
Interactive Technique / XR (Takashi Ohta, Koji Mikami)
Visual Design (Kazuo Sasaki, Motonobu Kawashima)
Sound Design (Akinori Ito)
High-end Graphics (Motonobu Kawashima)
Game AI and Engineering (Taichi Watanabe)

Sabina Akhmetova: portfolio



Olesia Chirkovskaia: portfolio



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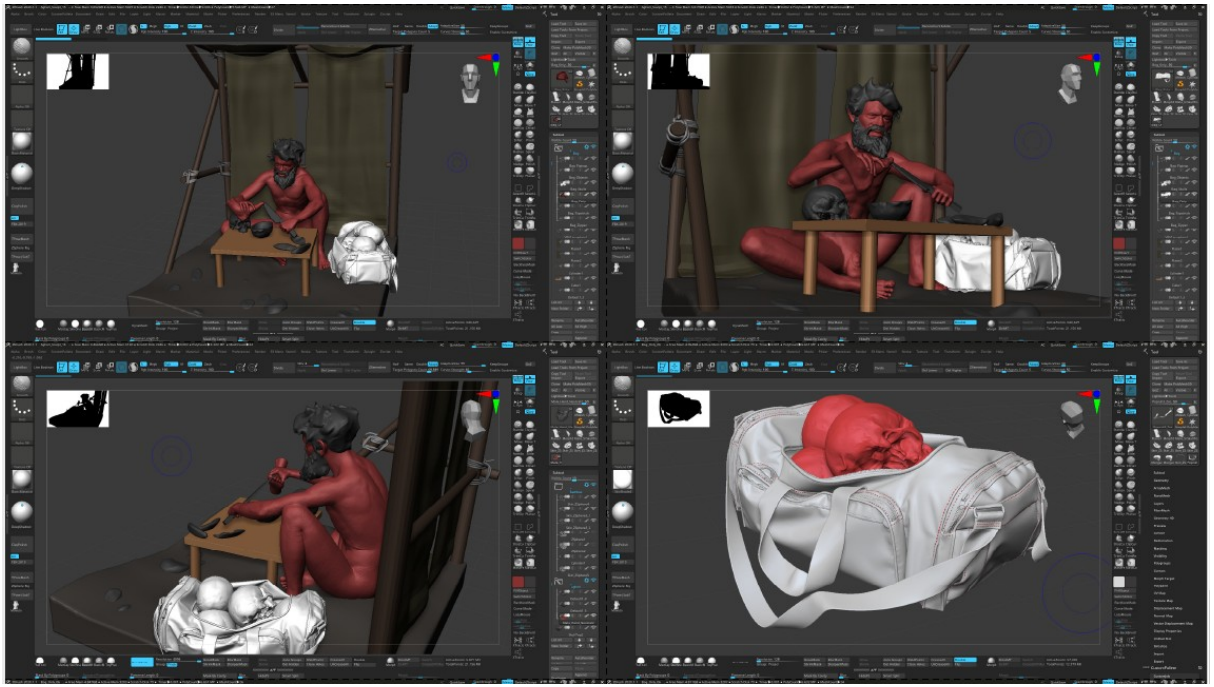
Robinn Mariančík : portfolio



QUANTUM INTROVERT

The following images are in-engine screenshots from my bachelor’s degree UE4 project. The final result was a VR experience of an art gallery on a spaceship.

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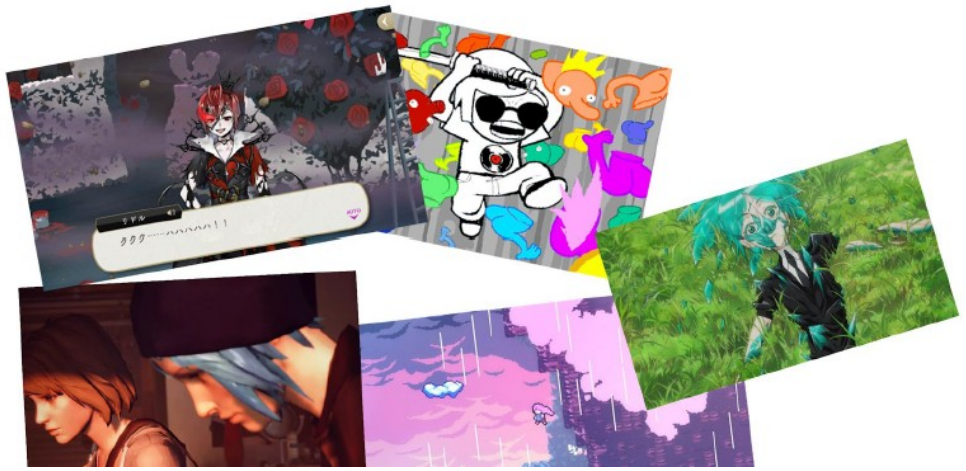
Research proposal

Helena Chojnowska

I don't have a specified goal. I think I would like to use this opportunity to learn from professors and other students :)
I have a few vague ideas.

- I would like to be able to create a small demo of a **platform game** maybe? (especially if I work in a team)
- or a demo of a **visual novel** (also especially if there is a team)
- if I work alone I could used on developing a simple but pretty **app** (such as rosary or meditation app) to learn unity and UI
- I am also interested in **animation** techniques, such as camera mapping and animation in general, stylized 3d and so on

some stuff that inspires me:



Research

Michal Náhlík, Robin Mariančík

I am participating in this project because I expect to gain new experience from it. Both in the field of creating games and communication in a team. My main interest is making 3D models and creating animation. I already have some experience with making games, I participated in the LAG project, in which we created a PC game in one week. In addition, I have been learning the whole process of making game asets, from high poly, through retopology, UV and texturing.

During this project I would like to collaborate on a project with Robin Mariančík. We would like to create a small scene of a sci-fi laboratory in in unreal engine 4 and mainly focus on the quality of individual assets rather than their quantity. Our goal is to create a functional scene in which the player can move and interact with objects. The laboratory will be a rather small workshop of an individual who works there alone at night. He is not very careful and has a bit of a mess in his workshop. It is full of experiments, not all of which have succeeded. With the visual style, we would like to focus on the wabisabi style. His work and tools would be imperfect, but beautiful.

Matthew Kounechongprasert

TUT Game Lab

Research project

My research or goal for this project is to gain experience in working with a team in game development. My main interests are working on 3D modeling, 2D or 3D animation, and sound design. Overall, I am using this opportunity to improve my craft in fields that I am interested in with the limited experience I have. And for the project, I am open to working with any members that share similar interests.

Research proposal

Chirkovskaia Olesia

My work is based on 2d animation and character concept, elaboration of character ability and visual effects, if we will have it. Also i would like to draw some preview illustration (like poster or book cover), that will introduce a project, maybe for commercial stuff. Generally i'm ready to work with everything and upgrade my skills in which i'm not so confident. I don't really understand what would be our project about, but i will try my best, even if it will differ from my interest.

My main interest:

- Magical and superpower stuff, spiritual world, scandinavian mythology, supernatural things in simple daily life.

-Concept of dream, another dimension, space-time paradox, time and story loop, astronomical and quantum physics stuff.

-A lot of easter eggs and brainteasers.

Some inspiration project:

- Homestuck (perfect balance of comics, animation and pixel game)

-Hayao Miyazaky, Studio Ghibli (i love everything about Ghibli's work, but specifically a atmosphere, backgrounds and spirit and character design)

- Sky: Chirldren of the Light, Journey, thatgamecompany

- Gensin Impact Game

-My hero academia (this might sound stupid, but it motivates me a lot)

Interests Area of Lab. Students

Robin Mariančík:High Quality Asset Production Using UE
Michal Náhlík:High Quality Asset Production Using UE
Helana Chojnacka: Small Apps, Sound Nobel, Animation
Olesia Chirkovskaiao: 2D Animation Character Design
Sabina Akhmetova: Character Design
Botakoz Temirkhan: Animation, Illustration, Concept Art, Character Design, storytelling
Matthew Kounechongprasert: Modeling, 2D/3D Animation, Sound Design
Romane Rakotovao (TUT Students) : Game Design, Emotion Design

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Team Project and Lecture

TEAM Project

1. Scifi_wabisabi : Motonobu Kawashima
Robin Mariančík, Michal Náhlík

2. Character-making : Kunio Kondo, Kazuo Sasaki
Helana Chojnacka, Olesia Chirkovskaiao, Sabina Akhmetova, Botakoz Temirkhan

3. Game and Sound Design : Hirokazu Yasuhara, Akinori Ito, Koji Mikami
Matthew Kounechongprasert, Romane Rakotovao

Lecture

Lecture from specific area from Professors.
•Game AI, Game Design, Realtime Graphics Technique, Interactive Technology, Sound Design, Storytelling, Stylized Anime Methodology and so on

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1. Scifi Wabisabi Team (Motonobu Kawashima)

3D Game Scene Production
Develop Realtime Demo of Laboratory Scene Using Unreal Engine 4
Science Fiction High Quality Look
Wabi-Sabi Style (Japanese Stylization)

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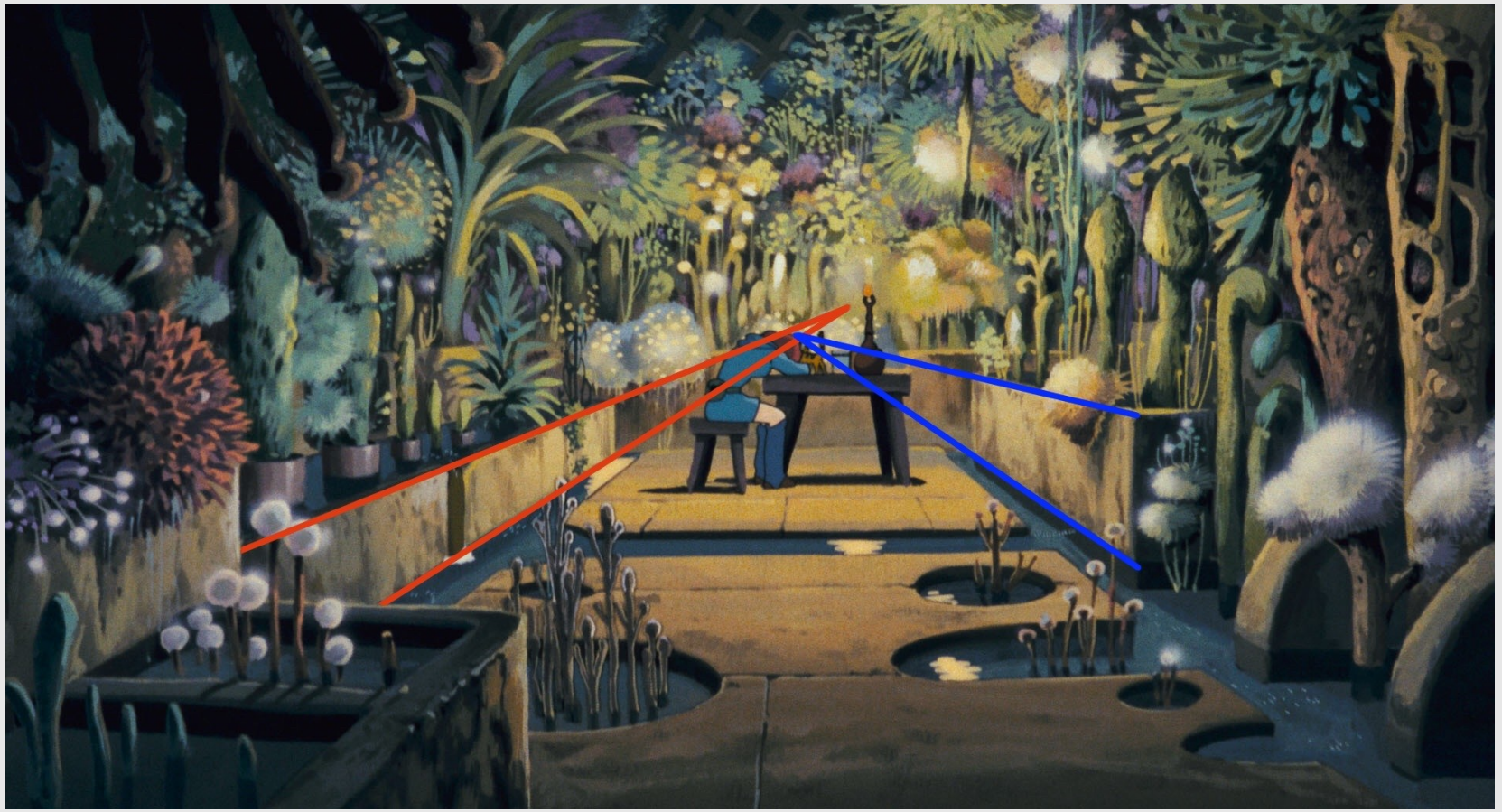
Example of Wabi-Sabi Style

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

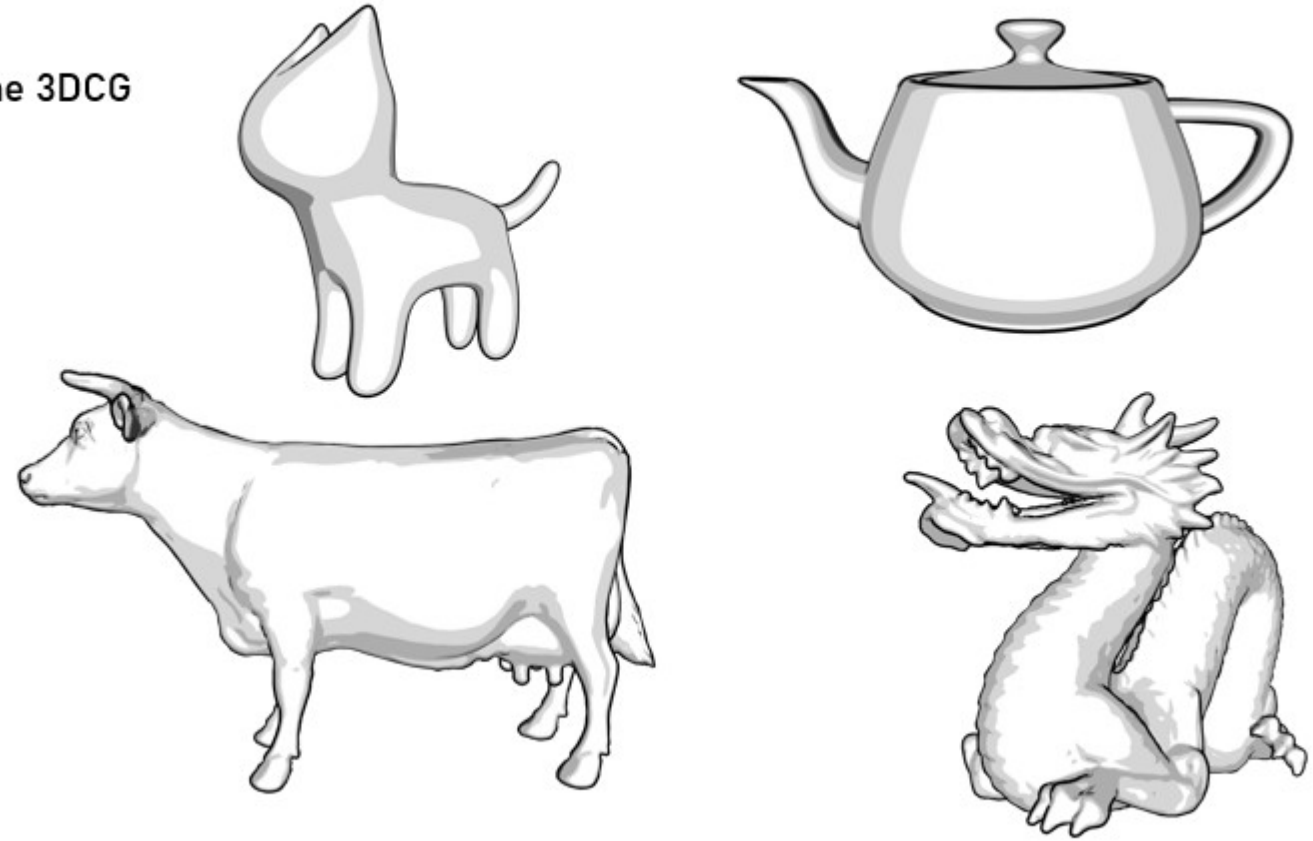
Example of Stylization



Intentional editing of vanishing points”Nausicaä of the Valley of the Wind” ©Studio Ghibli
https://www.ghibli.jp/works/nausicaa/#frame

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.

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2. Character Making Team

Character Making is an action to create a character(object) with own personality and able to tell a story.

[1] Lectures

Introduction to Character Making based on DREAM Process
CG and Content Production Technology for Character Making
Photogrammetry for Character Making
Japanese Characters of Traditional Game and Animation World

[2] Exercise

2D Character Making based on DREAM Process
3D Character Modeling using Photogrammetry

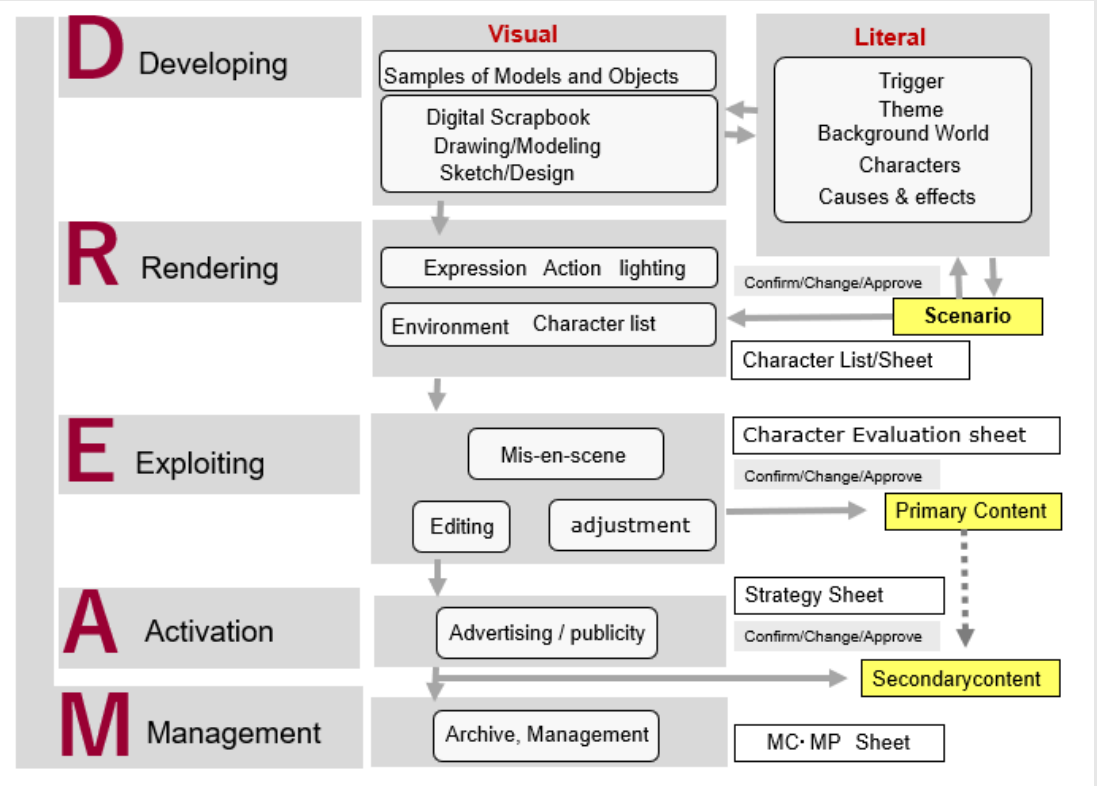
[3] Project Work

Requirement:

1. literal information : Story and Plot, Character literal information
2. Character Visual Design: Pose, Facial Expressions List
   Collage, Sketch&Coloring, Pose, Facial Expressions List, etc.
3. Storyboard

Optional:

3D Character model, Animation



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2. Character Making Team: Student Work

Scenario writing
10. S,M plot template

Dark Fantasy

	Chapter 1 Beginning	Chapter 2 Development	Chapter 3 End
S plot	S(Around 15 words) A boy who wants to take revenge on The Devil	S(Around 30 words) He changed his mind during his journey	S(Around 15 words) He fights the devil for protecting people
M plot	M(Around 50 words) The Devil is getting stronger and stronger in this weaken world. Parents were bring killed, so the boy wants to take revenge on The Devil.	M(Around 100 words) He learnt the importance of connecting with others when he was a mercenary. He realized that the angry is pointing to himself.	M(Around 50 words) He forgives himself and work with friends to fight the devil and protect the most important people

Character's literal setting （Character information）

Main character：Aru.surai

Role: Main character

Basic Setting
Birth place：small village (another world)
family：parents(died)
occupation ：mercenary

Outlook setting
Gender・Age： Male, 16
Body：170㎝・60㎏
clothes： light armor
Facial expression：poker face

Living Setting
Habit：sleep with his sword
Hobby： training with sword

Personaility setting
Speechless, not good at talking but fast reaction

Ability Setting
Body ability：as high as
Smartness：not smart
Skill：no

Related people
The mercenary group
The devil

Character name: Shari

- Because the content is for child, so a child type is chosen
- I have considered the item can be commercialized , like Broom etc.

Production time
Drawing：~20mins coloring：~40mins

Characters List

Students of City University of Hong Kong

(From left to right are Hassan, Sakana, XXX, Raphael)

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2. Character Making Team

References

[1] Takahiro Tsuchida, Ryuta Motegi, Naoki Okamoto, Koji Mikami, Kunio Kondo Mitsuru Kaneko, Character Development Support Tool for DREAM Process, Asia Digital Art and Design Association, International Journal of Asia Digital Art and Design Association,Vol.16, pp.4-12, 2013.4

[2] R. Motegi, Y. Kanematsu, T. Tsuchida, K. Mikami, K. Kondo, Color Scheme Scrapbook Using A Character Color Palette Template, Journal for Geometry and Graphics, Volume 20 (2016), No. 1, 101–112.2016.7

[3] Motegi Ryuta, Tsuji Shota, Kanematsu Yoshihisa, Mikami Koji, Kondo Kunio. ROBOT CHARACTER DESIGN SIMULATION SYSTEM USING 3D PARTS MODELS, International journal of Asia digital art and design, Vol.21, No.2, pp.81-86, 2017.11

[4] RYUTA MOTEGI, KAZUKI SATO, YOSHIHISA KANEMATSU, NAOYA TSURUTA, KOJI MIKAMI, KUNIO KONDO, 3D Drafting System based on Shape Analysis of Super Deformed Characters, International
Journal of Asia Digital Art and Design Association, Volume 23 Issue 2 Pages 9-15,2019.7

[5] Yoshihisa KANEMATSU, Chiaki ONO, Ryuta MOTEGI, Naoya TSURUTA, Koji MIKAMI, Kunio KONDO, PLOT WRITING SUPPORT SYSTEM FOR ENSEMBLE CAST BASED ON ANALYSING MOVIES,11th Asian Forum on Graphic Science(AFGS2017),F45,2017.8.

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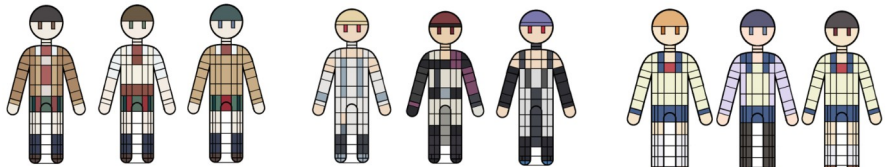
2. Character Making Team: Research

Color Scheme Simulation result of character groups

Color scheme templates



Result

Ryuta Motegi, Yoshihisa Kanematsu, Naoya Tsuruta, Koji Mikami,Kunio Kondo, Color Scheme Simulation for the Design of Character Groups, Journal for Geometry and Graphics Volume 21, No. 2, pp.253-262,2017.12

Facial Expression

Shown action/emotion:
yellling

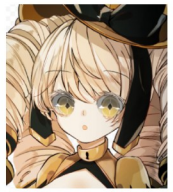
Emotion pattern
B 3 3
E 3 3
M 11

Shown action/emotion:
annoied

Emotion pattern
B 8 8
E 5 5
M 5

Shown action/emotion:
staring with anger

Emotion pattern
B 2 2
E N/A 5
M N/A

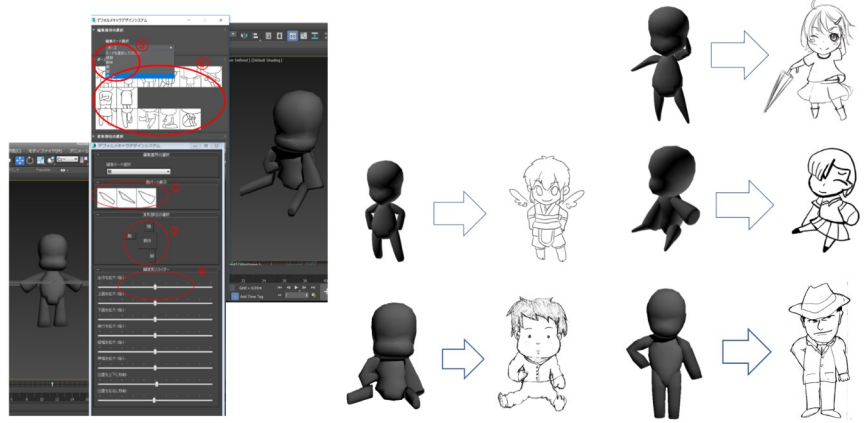


Shown action/emotion:
surprised

Emotion pattern
B 3 3
E 3 3
M 1 1

Ryuta MOTEGI, Yutaka YONEKURA, Yoshihisa KANEMATSU, Naoya TSURUTA,Koji MIKAMI,Kunio KONDO,FACIAL EXPRESSION SCRAPBOOK FOR CHARACTER MAKING BASED ON SHOT ANALYSIS,11th Asian Forum on Graphic Science(AFGS2017),F14,2017.8

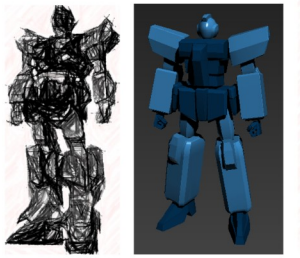
Super Deformed Characters Design, R. Motegi, K. Kondo, 2019



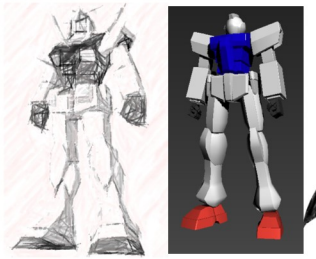
RYUTA MOTEGI, KAZUKI SATO, YOSHIHISA KANEMATSU, NAOYA TSURUTA, KOJI MIKAMI, KUNIO KONDO,3D Drafting System based on Shape Analysis of Super Deformed Characters, International Journal of Asia Digital Art and Design Association, Volume 23 Issue 2 Pages 9-15,2019.7

Color Scheme and Material Simulation, P. Lertariyasakchai, Kunio Kondo, 2018

Each model was created about **5** minute.
For selected color and material is about **2** minute.



©Sotsu·Sunrise
Mobile suit gundam



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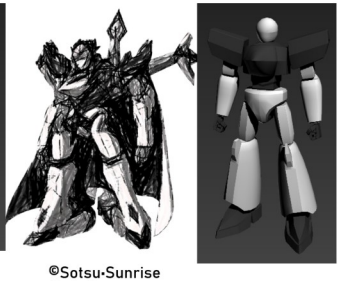
Mobile suit gundam



©Sotsu·Sunrise
Code Geass

Pitchaporn Lertariyasakchai, Ryuta MOTEGI, Naoya TSURUTA, Kunio KONDO, Color Scheme and Material Simulation for Robot Character Draft Design, ADADA 2018 in Taiwan, 2018.11, poster

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3. Game and Sound Design Team

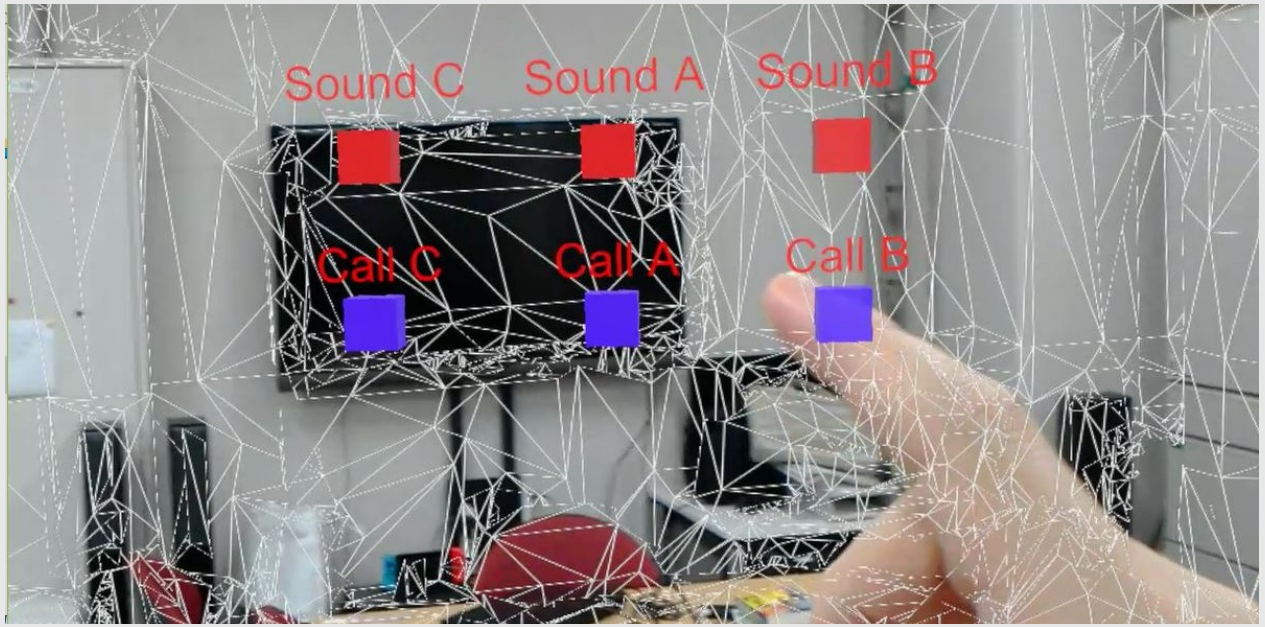
- Learning sound design methods and game design methods
- Practicing novel sound design and game design methods
- Prototype creation and implementation using Unity3D and ADX2
- Demonstration experiments

A sound source management system for sound design in AR.

•Selecting the playback method and changing the playback method during execution.

•Place sound sources in the AR space and test how they sound.

•Test computation-based playback methods such as localization calculation and sound field reproduction.



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3. Game and Sound Design Team

Dynamic Difficulty Adjustment for Suitable Game play
- Procedural stage generation using EEG of real-time play
- Horror presentation adjustment system based on heart rate
- Other methods: Voice Feature, Gaze, Electromyography and so on.

Henry D. Fernandez B, Koji Mikami, Kunio Kondo， Adaptable Game Experience Based on Player‘s Performance and EEG， NICOGRAPH International2017, http://ieeexplore.ieee.org/document/8047384/?reload=true

Henry Fernandez, Koji Mikami, Kunio Kondo， Perception of Difficulty in 2D Platformers Using Graph Grammars， International journal of Asia digital art and design， 22(2),pp.38-46, https://www.jstage.jst.go.jp/article/adada/22/2/22_38/_article/-char/en

The work completed so far…

Just Started

COMMUNICATION

Mainly, we use Zoom and Slack

15th Jan. : Kick Off Meting (ZOOM) Introduction
End of Jan.: Submission of Research Proposal
5th Feb. :Meeting (ZOOM) Team Forming
5th Mar. :Meeting (ZOOM)

Each Team Start Discussion From Mid Feb.

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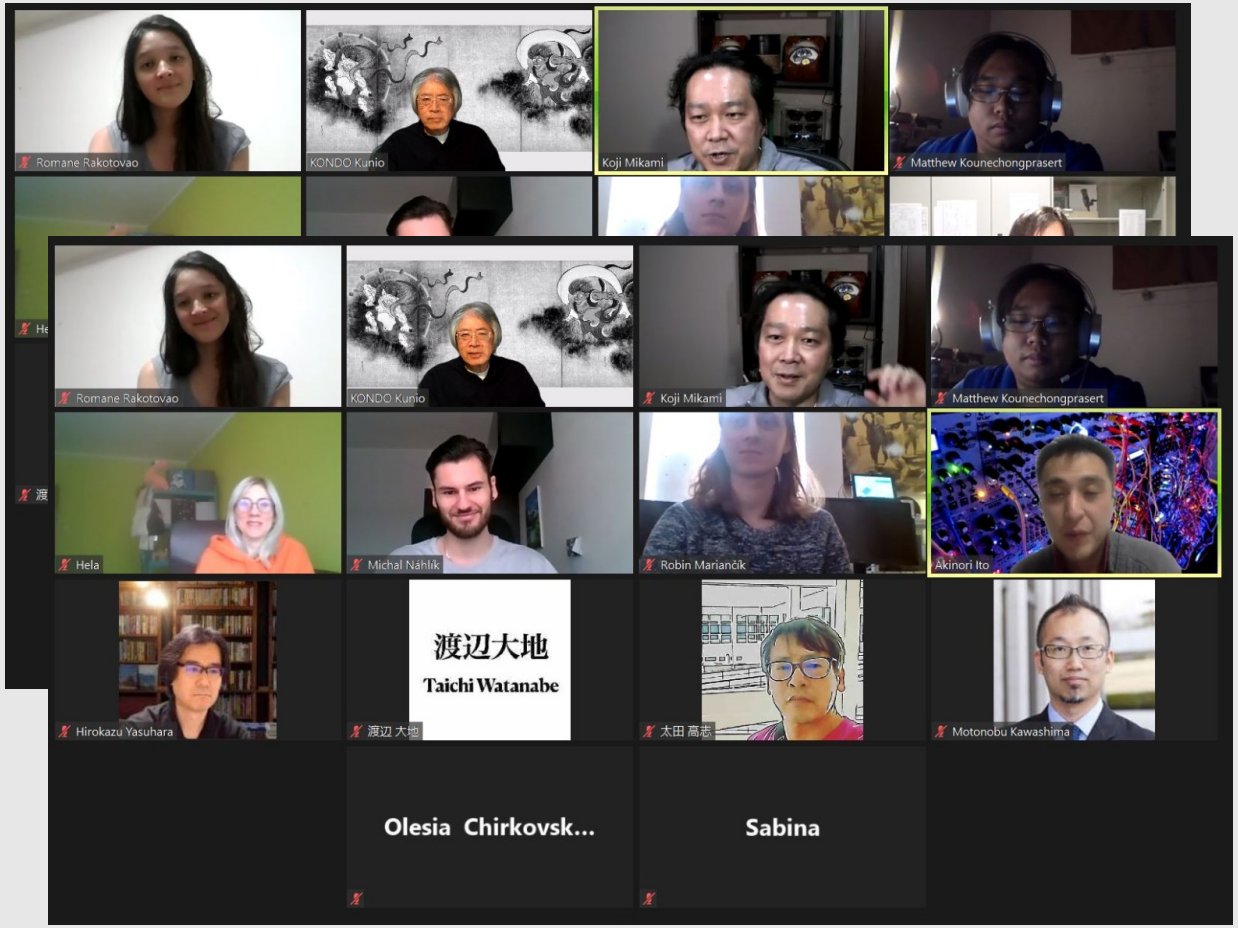

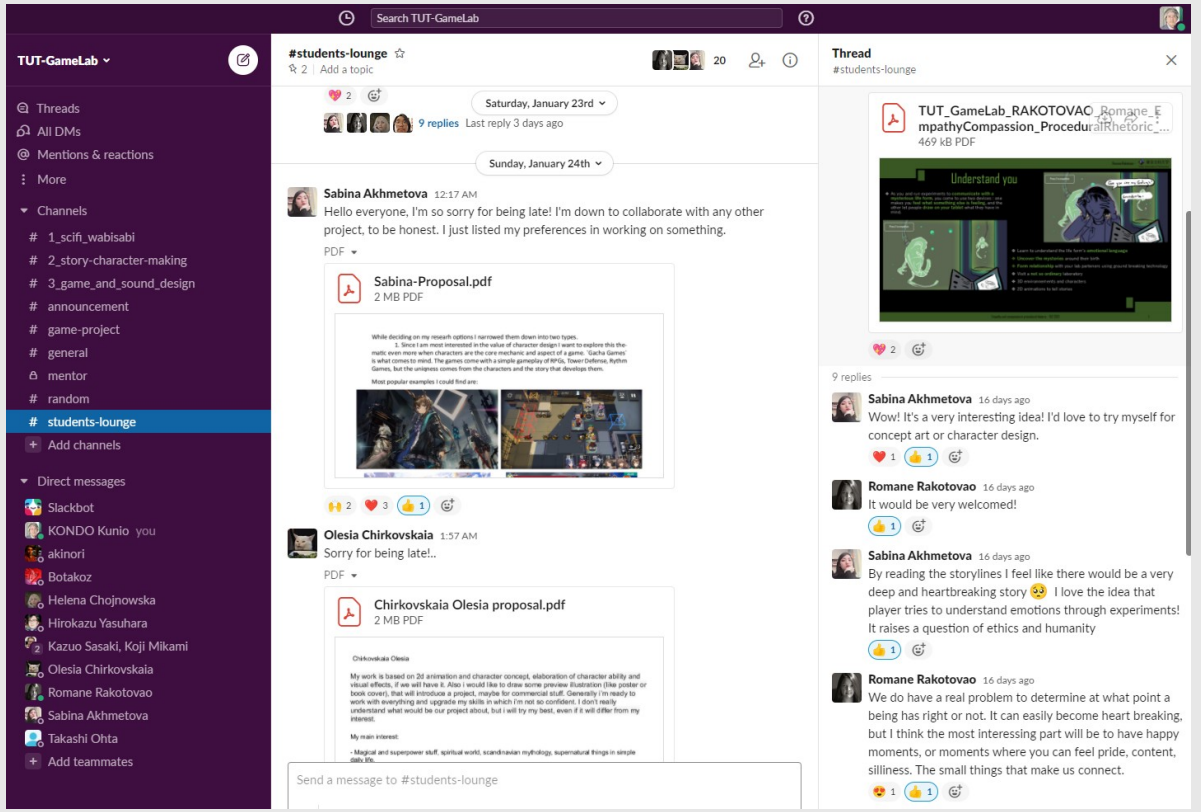

NOTES / SUGGESTIONS

I would like to fix and announce the schedule of students project

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Thank You

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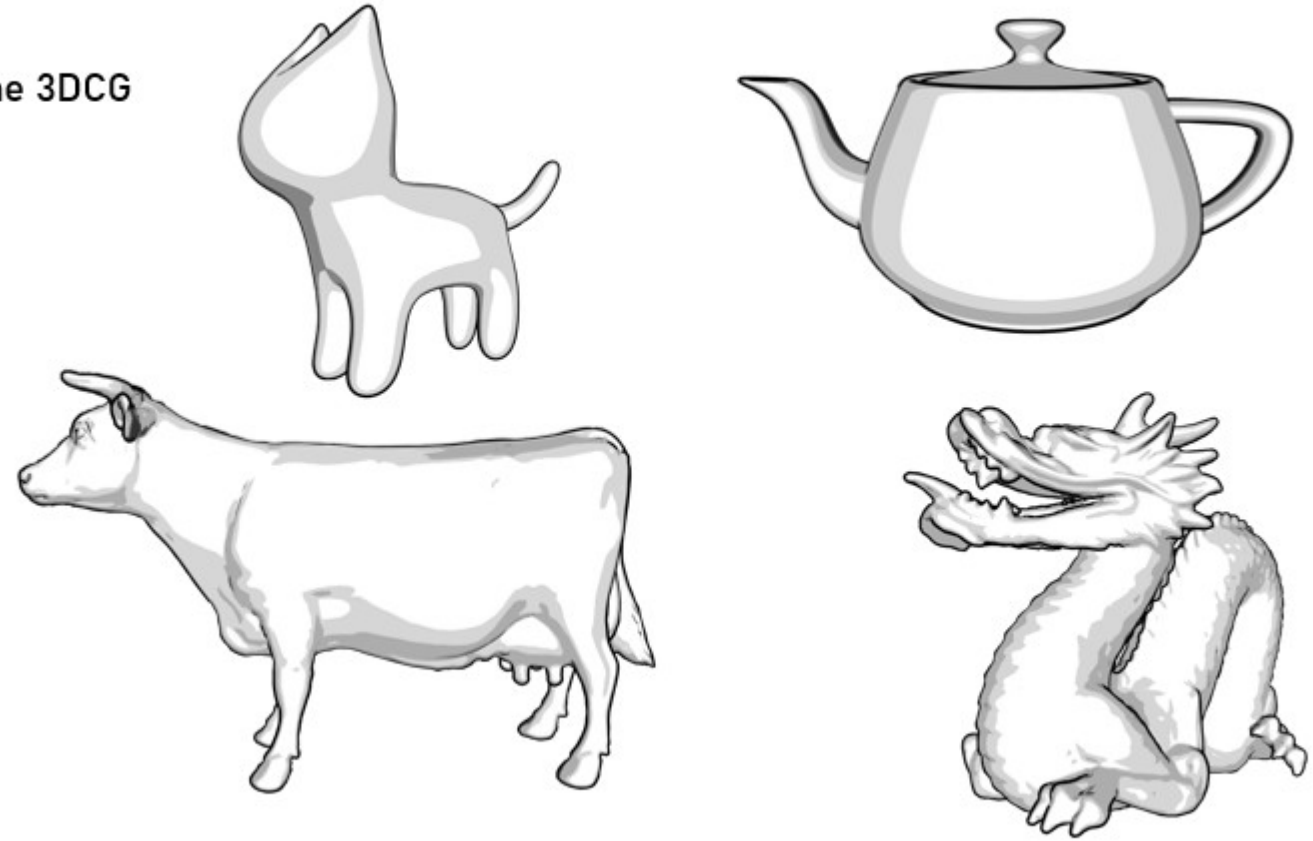
Shape Oriented Line Drawing, T. Matsuo, K. Mikami, T.Watanabe, K. Kondo,2009

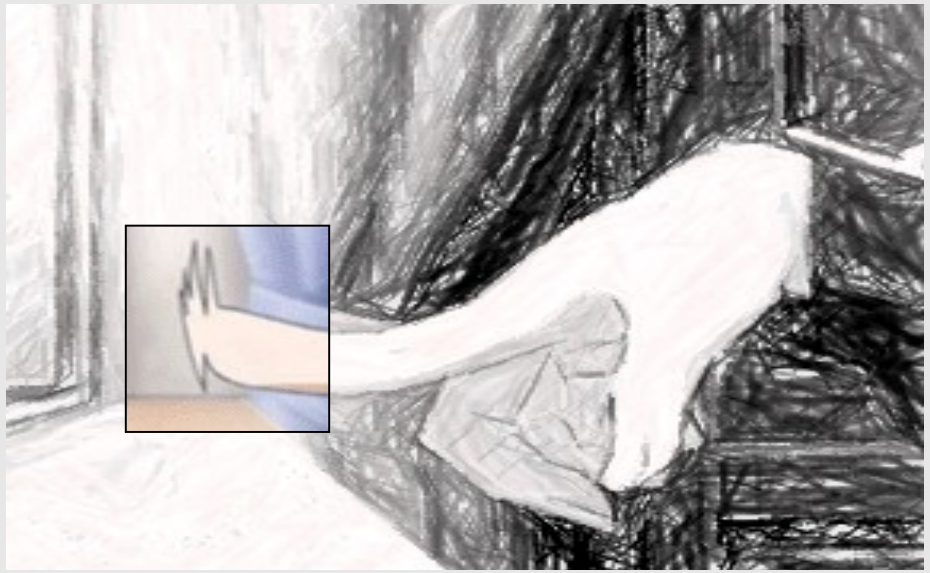
Real-Time 3DCG



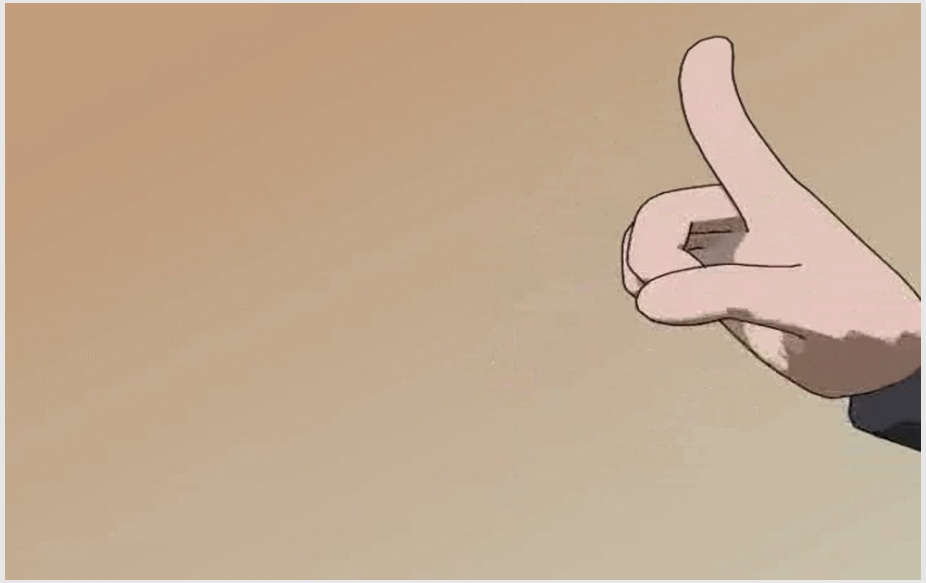
Takashi Matsuo Koji Mikami Taichi Watanabe Kunio Kondo "Shape Oriented Line Drawing in Real-Time 3DCG" SIGGRAPH ASIA 2011, 2011.

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

Animation with Cartoon Blur



Our proposed method



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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

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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
）

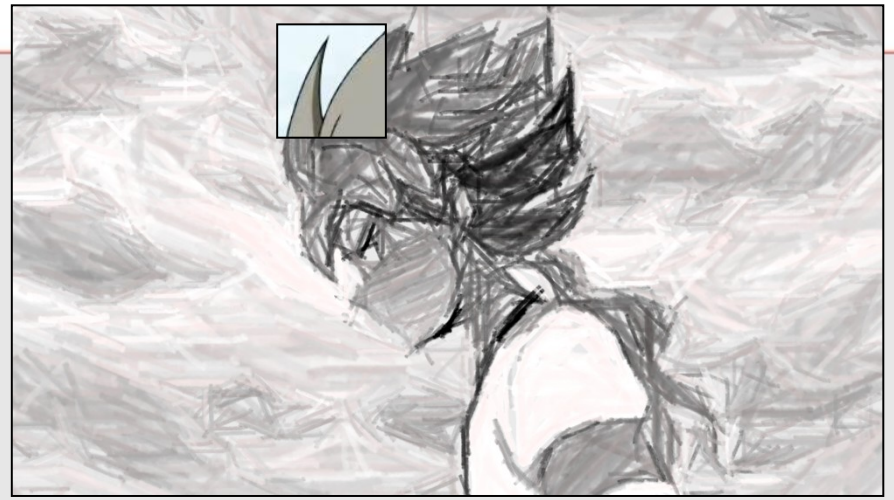
WANG yilong, Koji MIKAMI, Kunio KONDO , Real-time CG using Cartoon Blur method, Proceedings of 2015 Annual Conference, Digital Games Research Association JAPAN, 2016.2

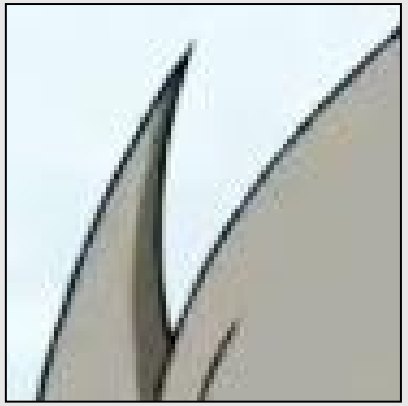
Real-time CG using Cartoon Blur, WANG yilong, Koji MIKAMI, Kunio KONDO ,2016.2

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

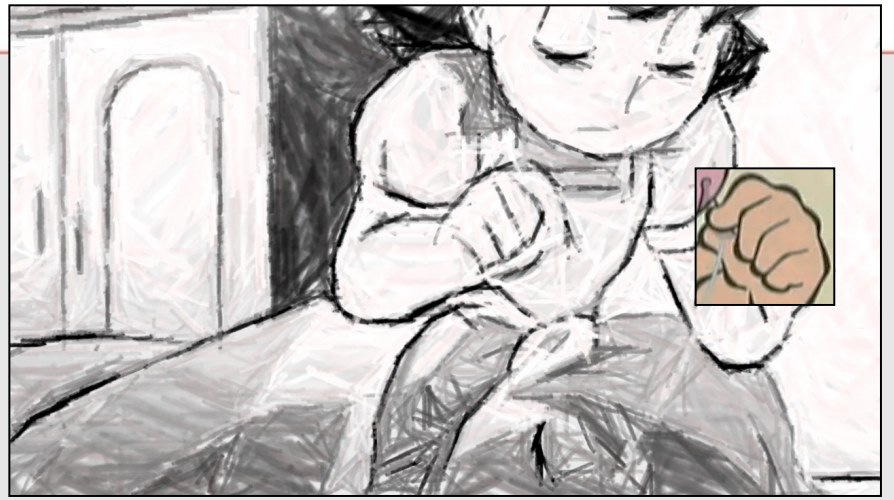
Shape Oriented Line Drawing, T. Matsuo, K. Mikami, T.Watanabe, K. Kondo,2009

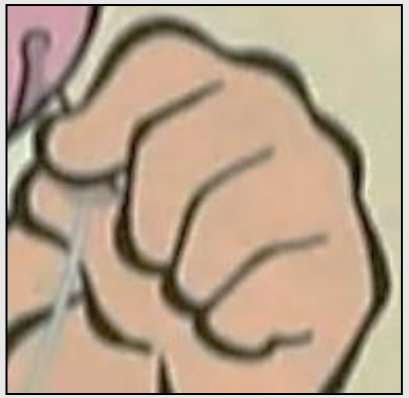




outline

(c)LEVEL-5/FC イナズマイレブン GO MOVIE 2011





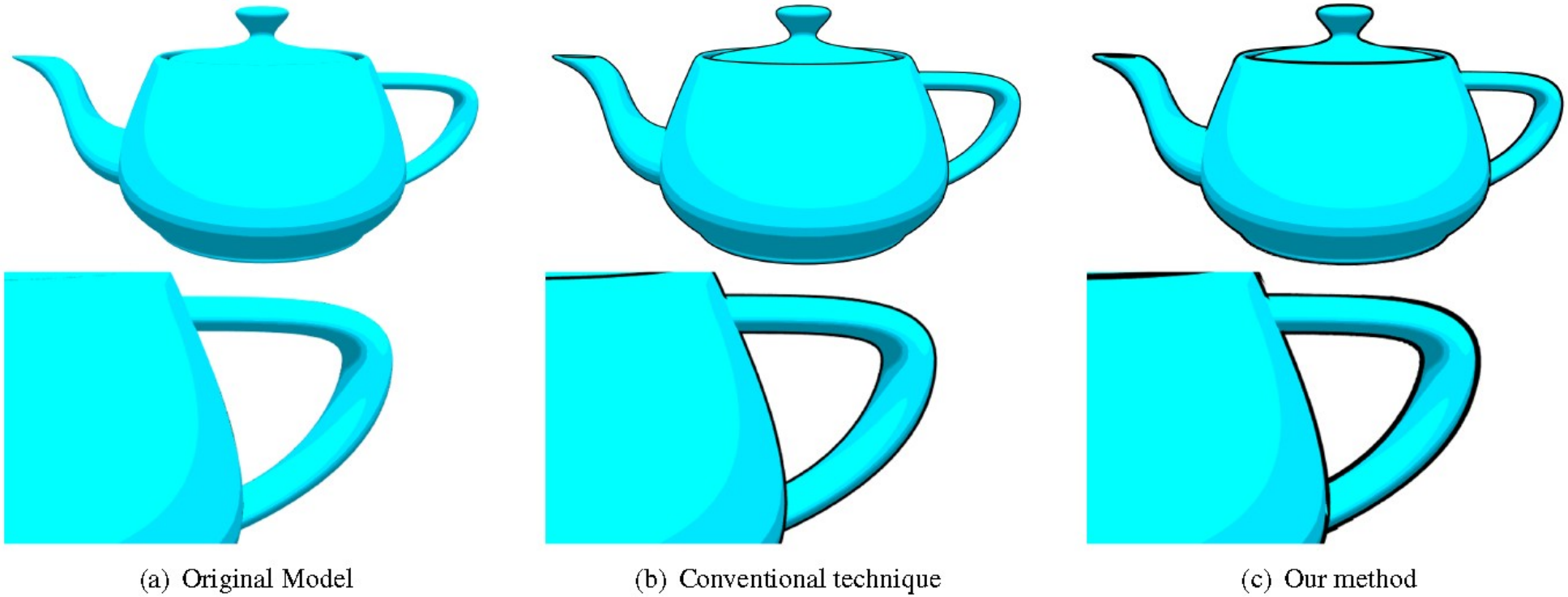
Outline with Variable width

(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



(a) Original Model (b) Conventional technique (c) Our method

Figure 1: *Comparing rendering techniques*

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