Details of Technology

Name of Technology	A set of CG technologies for creating natural scenery images	IT
Name/Post/Faculty	Professor Norishige Chiba, Associate Professor Tadahiro Fujimoto / Assistant Professor Osama Halabi / Media Technology / Graduate School of Engineering / Department of Design and Media Technology	
Key words	CG (computer graphics), VR (virtual reality), landscape simulation, visual special effect, sound effect generation	

What kind of technology is this?

Outline

A "set" of CG technologies for presenting natural objects and phenomena
Support for a wide range of applications focusing on either image quality or computational efficiency

A set of technologies required to create CG images of various natural objects and natural phenomena. These technologies include simulation technology, real-time animation technology, rendering technology, sound effect generation technology and sensor-based CG technology for acquiring real world information. We are developing the following set of technologies that can support a wide range of applications focusing on either image quality or computational efficiency.

[Developed technologies]

- Tree growth models, terrain generation technology, rocky scenery generation technology, season and weather simulation technologies
- Fluid phenomena simulation technology, aging process simulation technology, non-photorealistic rendering technology, range sensor technology
- Point-based rendering techonology, noise-based annimation technology
- Sound effect hybrid generation technology, GPU-based CG technology, etc.

What are its applications?

Applicable to the development of image contents such as movies, landscape scenery simulation for construction plans, VR and MR systems including landscape scenery images, disaster prevention training simulators, image media materials for media art, etc.

Related patents	
Related materials	See the Website of the Laboratory: Technical Papers, CG images, Animations, etc. http://www-cg.cis.iwate-u.ac.jp/lab/index.html

CERECO 4-3-5 Ueda, Morioka, Iwate 020-8551 Japan
Phone : +81-19-621-6494 FAX : +81-19-604-5036
e-mail : iptt@iwate-u.ac.jp