Proposing the Expressing Technique for a Fur of Fruit

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Computer Graphics is very powerful technique for realizing many purpose in various fields as Art and Engineering, Chemistry, Medical Science or Education etc. Computer Graphics is used for many scene, because it can represent some objects, not only real things but also imaginary things or invisible elements.

Futher more , nowadays, Computer Graphics is becoming to a closing technology. It requires for high performance hardwawre and professional software, but they are cheaper than before.So many people get a opportunity of trying to synthesizing graphics. In addition to opportunity of synthesizing graphics, they have a chance of showing theirs works to public by increasing the capacity of Internet connection. In most cases, the works, for example a 3DCG Model or a CG Animation, Games, is large data. Then, high-speed or large capacity line makes it possible to communicate many other people with his works. Hence, many professional or nonproffesional artist is encouraged by comments and other work. Computer Graphics has became to be familiar technique for many people.

But CG requires a high skill and a great time for synthesizing huge object or scene, complecated things like a natural phenomenon. Human perception is very sensitive to uncomfortable feeling of CG, thus, many reaserchers are trying to developing expressing techniques for realistic expression. In the natural phenomenon, it has so many factor including a environment. If you want to express a natural phenomenon, you have to know it well

and have a high skill or sufficient time which can express real things with reality. So many research propose a techuniques for real expression and reducing time or operation. But reality and simplicity is trade off, you can get a good result by devoting so many time.

Representing real phenomenon as physical simulation or growth simulation of plants, animal motion and appearance of natural objects has various problem, it has complicated structures and numerous factors like a geography and weather, interaction of other phenomenons. In these, Plants is very hot subject. people is familiar with plants because people see some plants since his childhood, so they know what is the plants but we don't understand how is the plants constructed. It is so difficult that you are synthesizing plants which has reality. Thus, many researchers are trying to understand and representation plants.

We focus on fur as trichome wich distributs surface of plants, it is very important elements of appearance, but research of focusing on fur is very few. And it has some problem still, thus we propose new thechunique for expressing to fur. Previous research, expressing fur of plants, is using L-system which is a parallel rewriting system and can represent various plants by user specified rule of targets. It is very powerful and flexible method, but it is so difficult. Specifing rule is unmundane work, it requires rigid knowledge of plants and into rewiting system. Then, we propose a new expressing technique which is surmounting the problem. In this technique, a process of representing fur is divided into two process, constructing shape of fur and distributing fur. It is flexible and easily representation, and we demonstrate various fur of distributing fruit surface.