IPA

2008 年度上期　未踏IT人材発掘・育成事業　成果評価報告書（プロジェクト全体について）

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1. プロジェクト全体の概要

This project proposed to develop a three dimensional modeling system focusing on indoor environments.

Recently, new services such as Google Earth and Google Street View have allowed us to more easily observe our real world environment, scanning the three dimensional real world into two dimensional cyber-world with satellite and regular cameras. However, a great deal of information is lost when three dimensional information is reduced to two dimensional representation. The goal of this project was to use three dimensional modeling technology to create a variety of web applications based on a three dimensional cyber world that retains the information richness of the original environment.

Using a range finder and omnidirectional camera the project focused on modeling indoor environments which other scanning and modeling services have not adequately been able to represent. The project also proposed to develop an application programming interface (API) to handle these three dimensional models in web applications.

2. プロジェクト採択時の評価（全体）

Development of 3D modeling system and API for indoor environment

I found the proposal to be highly interesting and worthwhile. To the best of my knowledge the path the proposer takes is original and has a high probability of success. I have some additional ideas that may help the developer succeed.

The notion of being able to scan interior spaces and from those scans to recreate the three dimensional images of the space has many potential usages. It would be useful in architectural designs, medical care, etc but the most promising applications include the one the developer suggested involving the reproduction of a real environment into a computer roam-able world. Being able to wander the inside of a shop in a realistic way; being able to recreate real environments into virtual spaces such as the VR web systems such as Second Life suggests many interesting and commercially profitable results from this effort.

The technical approach is very promising and is backed up by the researchers experience. The schedule is realistic and should be successful. I am also pleased with the clarity of the proposal which suggests that we will have many ongoing interactions during the duration of the project.

3. プロジェクト終了時の評価

Development of 3D modeling system and API for indoor environment

The purpose of this project was to develop a 3D modeling system that included sensing hardware for indoor environment and to create an API that would enable application developers to deal with the 3D world and the models that the system used. The developer successfully delivered a working system and achieved his project goals in a very satisfactory manner.

There are a large number of potential applications for such a system including the real estate business; retail stores that can create easily a model of your home/office and show how the furniture would look; the scanning of a house to create an environment for use in virtual reality - so we can live in our real home (enhanced). The potential commercial opportunities are multiple if such a system can be made easy to use, inexpensive and most of all easily used to create applications.

I am very pleased the project worked out so well, and the developer managed various challenges successfully and was able to complete the project on time and with success.