

## A System to convert a series of 2D information into 3D Models

### TECHNOLOGY DESCRIPTION

This technology is a system to convert 2D models to 3D models as a starting point of a 3D design.

### TECHNOLOGY FEATURES

This invention uses an IBM technique using optical flow and trigonometry with images captured via webcams with known small angle rotations and distance from the camera. As it only requires a laptop, a webcam and a simple experiment setup, the implementation cost is reduced. It applies trigonometry principle to deduct the depth values of the feature points.

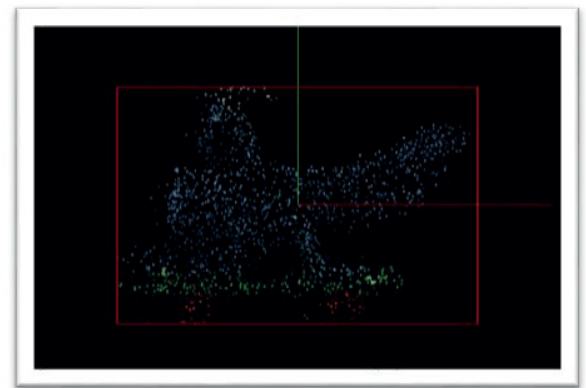
### ADVANTAGES

- Reduce implementation cost
- Easy to handle

### INDUSTRY OVERVIEW

#### Prospect Industry: Digital Scanner market

The potential applications of this new scanner include reverse engineering, form & shape inspection/ quality control, virtual cinematography (movies and video games), digital archiving (cultural artefacts), non-destructive testing, and prototyping. Potential users may include animators, game developers, architects, interior designers, furniture designers, and industrial designers. The 3D scanner market is expected to grow from USD 3.41 billion in 2015 to USD 5.90 Billion by 2022, at a CAGR of 9.6% between 2016 and 2022. The 3D scanner hardware market size, in terms of volume, is expected to reach 114.9 thousand units by 2022, at a CAGR of 10.9% between 2016 and 2022. The rapid technological developments and the growing adoption of 3D scanners to enhance the quality of products and reduce their manufacturing time are some of the significant growth drivers for 3D scanner market. The United States held the largest share of 3D scanner market in 2015 due to strong presence of key players offering state-of-the-art 3D scanner products and rising adoption of VDI/VDE regulations. APAC is the most promising region for 3D scanner market and is expected to witness highest growth rate because of rising demand for 3D scanners from automotive, healthcare, and architecture & construction industries.



## 3D Digital Models

**Prof. Dr. Rahmita Wirza O.K. Rahmat**  
Faculty of Computer Science and Information Technology