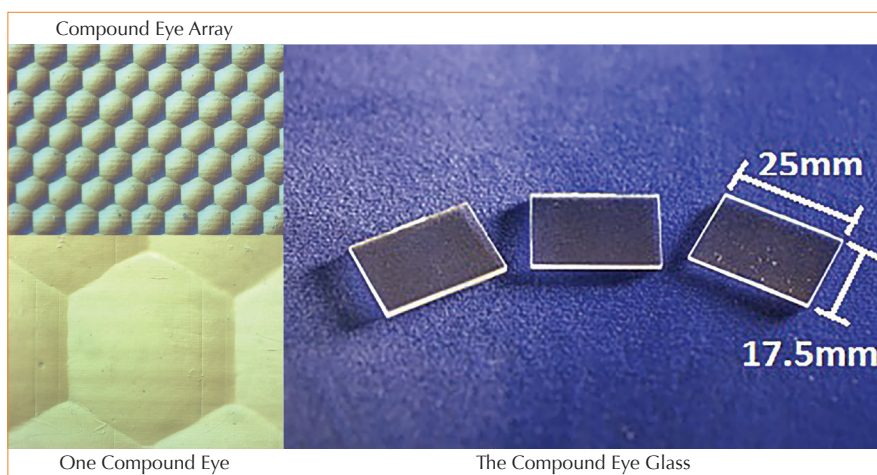


高清3D成像複眼透鏡系統 Compound Eye for Novel High Definition 3D Imaging

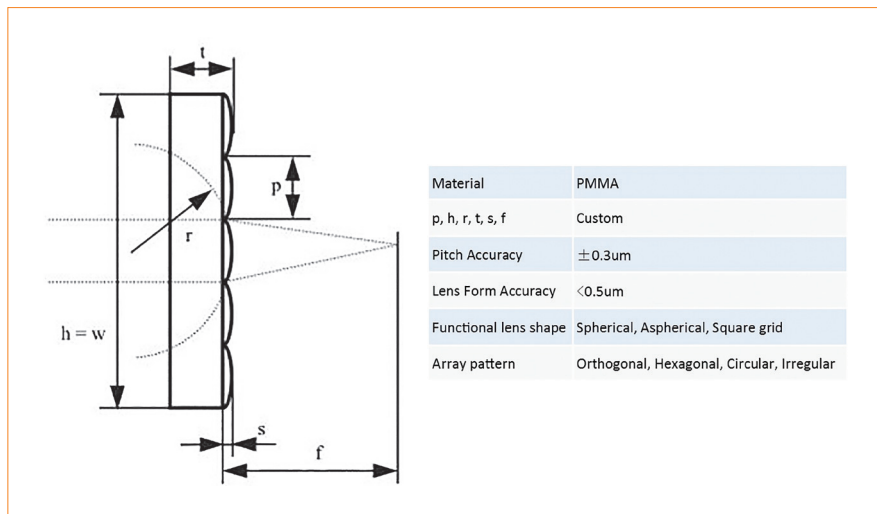
無損成像的新型高清3D成像系統
A novel high definition 3D lossless imaging system

成像過程往往受到視野、波面像差、環境光，以及感應器與成像系統的解像度影響，導致目標景物的信息無法被準確地傳遞到成像面，因而產生影像細節變形、偏差和雜訊等問題，令成像質素下降。

複眼透鏡系統採用高清3D及無損成像技術，能同時獲取近場及遠場目標景物的真實3D位置訊息，可解決因光線、解像度不足等因素所致的成像失真問題。



複眼透鏡
The Compound Eye



技術規格與側視圖
Specifications and side view

The imaging process is often affected by the field of view, wavefront aberration, ambient light, as well as the resolution of optical imaging system and detector. In such case, the image information of the object cannot be accurately transferred to the image plane, resulting in distortion, deviation and noise convolution that affect the ultimate image quality.

Based on high definition 3D lossless digital imaging technology, the Compound Eye imaging system can acquire realistic 3D positional information of objects at both near and far fields, which provides a solution to image distortion caused by conditions such as insufficient light and inadequate resolution.

Principal Investigator

Prof. Wing-bun LEE

Department of Industrial and Systems Engineering

Contact Details

Institute for Entrepreneurship

Tel: (852) 3400 2929 Fax: (852) 2333 2410 Email: pdadmin@polyu.edu.hk

專利申請編號及國家: 201510902888.2 (中國), 201510028430.9(中國), 201510811019.9 (中國), 62/269,114(美國), 62/269,115(美國)

特色與優點

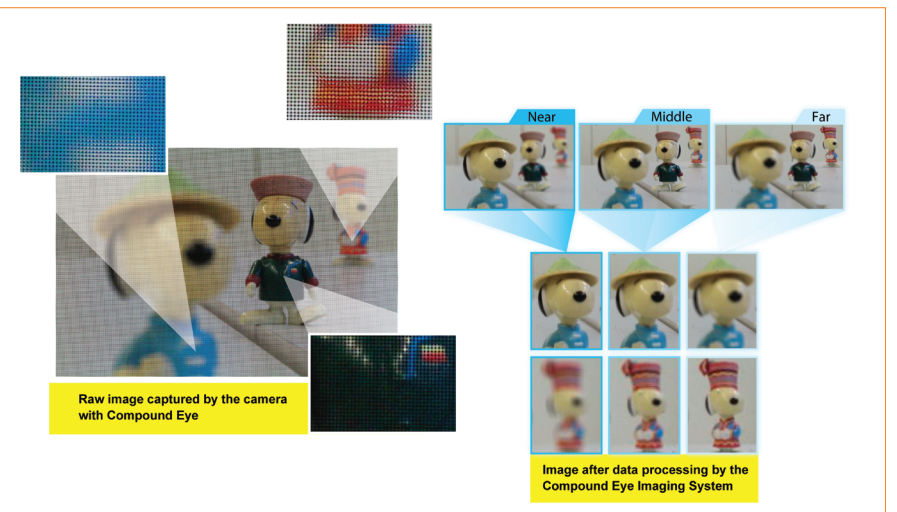
- 可於成像後改變對焦位置
- 不影響視場大小
- 適用於近場和遠場成像
- 系統設計靈活，可按不同應用需要而調整
- 透鏡以精密注塑加工生產，成本低廉

應用

- 多種成像用途，例如：光場相機、監控攝像鏡頭、顯微成像系統和3D成像
- 高精度表面輪廓檢測
- 位移及速度測量

獎項

- 第44屆瑞士日內瓦國際發明展 - 金獎 (2016年4月)
- 俄羅斯國際科技協會特別大獎 (2016年4月)



應用複眼透鏡於攝影成像用途
Compound Eye for Photography

Patent Application No.: 201510902888.2(PRC), 201510028430.9(PRC), 201510811019.9 (PRC), 62/269,114(USA), 62/269,115 (USA)

Special Features and Advantages

- Able to reselect the focus of a captured image
- Does not reduce the size of the field of view
- Applicable for both near-field and far-field imaging
- Flexible system design that can be customized for different applications
- Lenses can be manufactured by precision injection molding at low costs

Applications

- Imaging applications: light field cameras, surveillance cameras, microscopic imaging systems and 3D imaging, etc.
- High precision profile testing and measurement
- Displacement and velocity measurement

Awards

- Gold Medal – 44th International Exhibition of Inventions of Geneva, Switzerland (April 2016)
- Prize of Association “Russian House for International Scientific and Technological Cooperation”, Russia (April 2016)



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