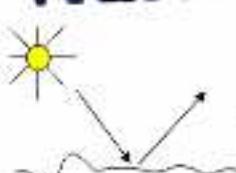


# Obtaining Bidirectional Texture Reflectance of Real-World Surfaces by means of a Kaleidoscope



The Bidirectional Texture Function (BTF) describes how light is reflected off a surface. It is obtained by sampling the colour of the surface under different lighting & viewing conditions – precisely what each reflected image in a kaleidoscope provides – and enables a realistic rendering of surfaces in Computer Graphics.

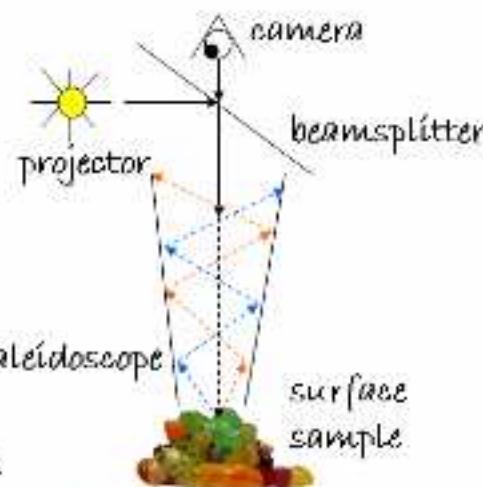
Objective: to investigate the use of kaleidoscopes in obtaining the BTF of real-world surfaces.

"This is a great project!"

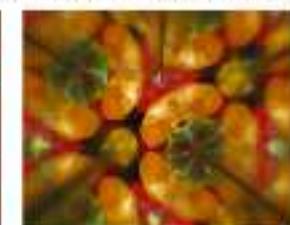
Steve Odom  
CEO of Verso Technologies

"Fantastic in all respects!"

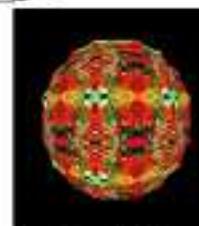
Mark Whitelock



Interesting configurations & effects  
Simulated vs Real → Results



Non-tapered: a tiling effect



Tapered: a virtual sphere



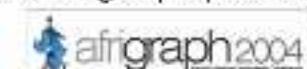
Cylindrical: rings of reflection



Business  
Connexion



Coming soon to



Judith Radloff

Credits:

Professor Shaun Bangay and Adéle Lobb  
Rhodes University Computer Science Department

[www.cs.ru.ac.za/research/students/g00r3353](http://www.cs.ru.ac.za/research/students/g00r3353) g00r3353@campus.ru.ac.za



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