High Efficiency Laser Based Multi User Multi Modal 3D Display (HELIUM3D)

- **Aim** - to develop a laser illuminated three dimensional display for multiple viewers without the need for them to wear special viewing glasses (autostereoscopic).

- **The consortium members** –
  - De Montfort University, UK,
  - UCL, UK
  - Philips Consumer Lifestyle, NL,
  - Barco, BE, University College London
  - Fraunhofer Heinrich-Hertz-Institut,
  - Eindhoven University of Technology
  - Koç University, TR,
  - Nanjing University, CN
HELUM3D – UCL Involvement
includes laser scanning and beam forming
HELIUM3D link to C. Kao

- Red, Green and Blue Lasers are now being used in displays.
- Charles K. Kao and George Hockham succeeded Antoni E. Karbowiak at Standard Telecommunications in 1964 and redirect the research from thin film waveguides to optical fibre waveguides.
- In their paper they wrote that "A fibre of glassy material in a cladded structure represents a practical optical waveguide worth important potential as a new form of communication medium."
- The HELIUM3D light engine uses 48 laser emitters in each of the green and blue lasers (3 Watts each) and 20 laser emitters in the red laser (4 Watts).
- The red, green and blue lasers are combined and focused into either an optical fibre or a waveguide as part of the light engine.