

Measuring Air Quality using Low Cost Sensors and Google Street View Cars

Stefan Bell - Physics



National Physical Laboratory





- UK's national measurement institute.
- Founded in 1900.
- Significant contributions to:
 - Radar
 - Atomic clocks
 - Improving cancer treatment
 - Advancing hydrogen fuel cell technology
 - Air quality
- Worked in the Emissions and Atmospheric Metrology Group, within the Environment department.



Role

- Tested low cost sensors, specifically CO₂ sensors and NH₃ (ammonia) diffusive samplers.
- Maintained a network of NO₂ diffusion tubes at Marylebone Road air quality monitoring site.
- Maintained and calibrated air quality monitoring equipment in Google Street View cars.





- Breathe London project.
- International study to measure air pollution in London.
- Prestigious companies, organisations and research institutes.
- Google Street View cars outfitted with air quality monitoring instrumentation.

Outcomes

- Calibrated the instruments to ensure results obtained were accurate.
- Worked as part of the team towards improving the system as a whole.
- Gave a tour of the facilities to a Chinese delegation, helping to improve international relations.



- More confident.
- Better team work and communications skills.
- Improved analytical skills.
- Improved time management