Brilliant Careers for STEM students in the South West: Sintela

Employees:
50

Location:
Bristol

Industry:
Sensors

What does Sintela do?

Sintela work with an extremely nifty technology that repurposes fibre optic cables as sensors for earthquakes, traffic and much more. They develop this technology and make it as effective as possible, as well as travelling across the world to install their systems and building hardware to implement it.

How does Sintela's technology work?

Sintela's technology is called Distributed Acoustic Sensing, or DAS for short, and it's very clever. It works by interpreting the light backscattered from a pulse of light as it travels through a fibre optic cable (the kind of cables used for internet connections). Strain in the fibre induced by a vibration or pressure on the cable causes the light pattern to change, and these changes can be interpreted by algorithms to tell us what caused the strain. This means that from one DAS Sensing Unit up to 100 km of optic fiber can provide up to 20,000 independent 'microphones'.

Three key questions:

- How could you tell apart a truck from a car, based solely on how a fibre optic signal changes?
- How do you make sure that the technology is accurate every time?
- What could be some innovative uses for this technology?