

Google's internet balloons to circle Earth

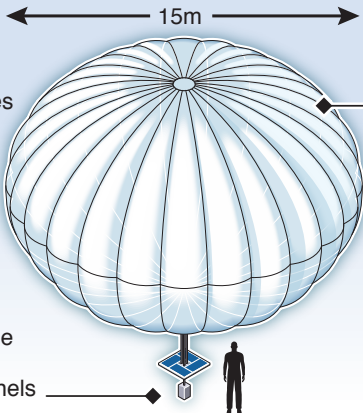
Google has teamed up with three Indonesian telecommunications companies to boost internet access in much of rural Indonesia using solar-powered helium balloons. More than 100 million people, out of the 255 million-strong population, currently have no internet access



PROJECT LOON

Each balloon provides connectivity to ground area of 40km in diameter, using LTE wireless communications technology

Payload: Two radio transceivers, flight computer, and altitude control system, all powered by solar panels



Envelope:

Tightly sealed polyethylene enables balloon to last up to 187 days

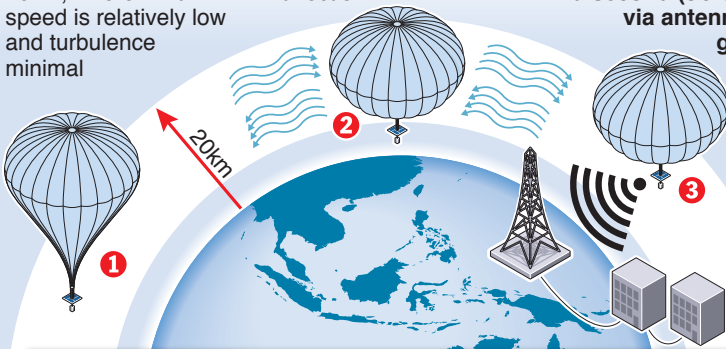
Automated crane, plus two or three people, can launch one balloon every 15 minutes

HOW BALLOONS WORK

1 Helium-filled balloon sent into stratosphere at altitude of around 20km, where wind speed is relatively low and turbulence minimal

2 Software moves balloon up and down to find layer of wind blowing in right direction

3 Internet beamed to connected device at around 10 megabits a second (3G speed) via antennae on ground



Google plans to launch 300 balloons around world to provide coverage to New Zealand, Australia, Chile and Argentina in 2016