**PROBLEM SPACE INFO**

Source: <https://www.gq.com.au/entertainment/tech/how-elon-musk-could-be-set-to-fix-australias-internet/news-story/f2615a77603633869dd81dce996fd438>

<https://www.starlink.com/>

Background

* Lack of money
* Australian’s being ripped off

Main Problems

* Lack of consistency around Australia (not a lot of it is populated)

Possible Solutions

* Elon Musk Starlink satellite network
  + Via plug in terminals
  + Aims for global coverage
* Expensive but lasts long (doesn’t degrade in Earth’s atmosphere)
* Compact
* 60+ satellites at the moment

Source: <https://crowdsupport.telstra.com.au/t5/Home-Broadband/Why-does-Telstra-slow-uploads-speed-down/td-p/419406>

Background

* Upload capped at around 1Mbps
* Overpricing
* Hotel wifi is faster lol
* Telstra having bad support over cable

Main Problems

* Most connected internet is asymmetric, only one packet of data in or out but never both at the same time (ADSL)
* Australian ISP’s work the same
* Telstra’s applied limit because of population
* Telstra not giving fair rates and overpricing
* Routers not being properly optimised (e.g. buying a 1Gb router but only having 20Mbps)

Source: <https://www.whistleout.com.au/Broadband/Guides/why-your-nbn-is-slow-and-what-you-can-do>

<https://www.whistleout.com.au/Broadband/Guides/nbn-fttn-everything-you-need-to-know>

Background

* Network congestion
* Australia network to population
* ACCC rules require NBN ISP to be more specific about their services
* NBN currently uses Fibre to the node (FTN) technology
  + Uses copper wiring which already exists
  + Hub connects to node connects to home – long process
  + Universal modem
  + Long roll out
* Forced to change to mobile data sometimes
* A lot of people are paying for lower tiers without knowing, lied to

Main Problems:

* Evening speeds are better than morning speeds
* Select few providers
* Distance from provider node – nodes need to be close for faster internets
* Must install nodes everywhere
* Max speeds hard to achieve
  + Still congestion in the top speeds
* Copper wires eventually degrade
* Australia can’t be bothered to increase maintenance fees and upgrade costs down the line
  + Cheaper to use existing technology

Source: <https://www.lifehacker.com.au/2019/04/australias-internet-speeds-are-getting-faster-slower-than-everyone-else/>

Background:

* Australia always behind
* 62th in the world
* Australia lagging behind
* Constraints set by government policy
* Commercial hubs for ISPs don’t exist

Main Problems:

* Restrictions on service usage
* Lack of country coverage

Source: <https://www.forbes.com/sites/millystilinovic/2017/02/14/how-australias-ridiculously-slow-internet-speeds-are-harming-its-residents/#1be6ef03fc06>

Background:

* Proposed premium optical fibre telecommunications network
* Liberal change of party to Tony Abbott which halted the decision
* MTM (multi tech mix) network was approved which used older technologies which was supposed to save time and money, that failed

Main Problems:

* network doesn’t handle all packet
* extreme packet loss
* short-sighted for high speed internet rather than carrying out current plan
  + focusing on the highest end rather than bringing Australia to a total good median speed for internet
* disadvantage to growth in both states
* copper wire slows down the further it goes

**KOREAN INFO**

Source: <http://www.korea.net/NewsFocus/Column/view?articleId=146837>

Background:

* smaller country, more people
* government help
* online gaming is huge
* innovation
* high performance and technologically forward

Source: <http://edition.cnn.com/2010/TECH/03/31/broadband.south.korea/index.html>

Background:

* cheap connection
* culturally dependent
* government encouraged society
* population density
* fibre optic cabling

**COPPER WIRE INFO**