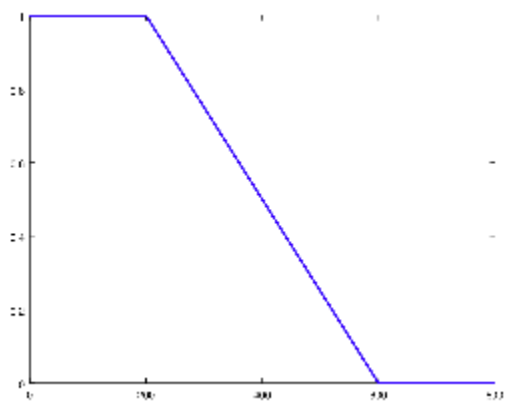


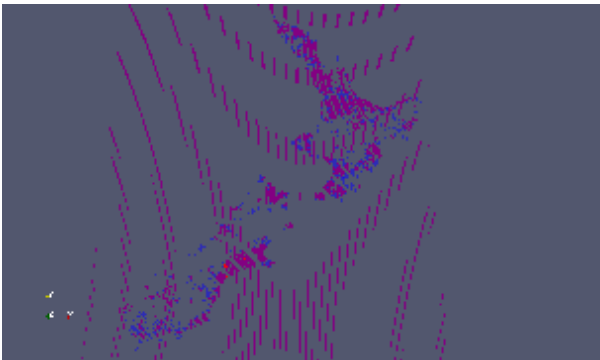
Non-uniform grid 18p6

This non-uniform grid is based one the previous version defined [here](#) with the key differences:

- No longer using vs500 but instead using vs30 as a parameter
- The transfer function for scoring is: 1 for vs30 < 200; 0 for vs30 > 600; and linear in between



- $\text{total_score_domain} = w_v \cdot \text{score_vs30} + w_p \cdot \text{score_population}$; $w_v + w_p = 1.0$
- w_v and $w_p = 0.5$
- The acceptance threshold for points to split were 0.7



The picture shows blue points: added points in the new grid. purple points: points in both grids and red points: points removed in the new grid

Number of stations in the grids proposed.

	20170617	200<vs30<800	200<vs30<600	50:50 weighting 0.6 acceptance	50:50 weighting 0.7 acceptance (18p6 final version)
400m	39103	53177	53177	50106	47524
200m	59687	97123		(83000 - 91000) - estimate	80922
100m	79510	140702		(117000 - 132000) - estimate	113682

Naming

The station *.ll files contain lines like the following

167.426710 -34.059020 0100001

The first digit is the level associated with it 0 is part of the base grid and level 4 is the finest resolution in the 100 m grid.

The second digit is a versioning number. This is just to make sure the 17p6 version has different names to the 18p6 version. This version has been coded as 1.

vs30 files

These have been generated using NZ_vs30_18p4. For stations that did not have a value a default of 500 m/s was used.

Real Stations

On hypocentre/kupe the non_uniform_whole_nz_with_real_stations* files have added 2164 stations.

There are 2242 unique stations as of 20180615.

Removing stations off the coast of NZ returns 2164

Removing stations that are closed and only keeping stations that are of the network: NZ, SM, SC, SB or SX. returns 385

(NZ (included per Brendon's advice

SM National strong motion network

SC Canterbury regional strong motion network

SB is included in <http://info.geonet.org.nz/display/equip/Network+Location+Queries>

operational strong motions stations XML file.

SX private sites strong motion.)

Future Changes

Wellington & Christchurch CBD override / areas of high vs30 change

Varied level scoring thresholds

Plot for scores across NZ to visualize where scoring thresholds should be.

Selection of current Real Stations (instead of historic)

Finer grid than 5x smaller