**Structures**

A phoneme inventory will be a list of phonemes. No duplicates are allowed in an inventory.

A phoneme will be a list of distinctive features like place and manner of articulation.

**Consonant Patterns**

* Totally random
  + Maybe throw in some common stuff
* Pick two randomly and find their “intersections” and add to inventory. Pick another random consonant and repeat until enough have been added.

**Consonant Generation**

For randomly generated:

1. Generate random number
2. Generate random phoneme
3. Compare with all phonemes already in inventory
4. Add to inventory if not a duplicate
5. Stop when random number is reached

For the pick two method:

1. Generate random number
2. Generate two random phonemes
3. Pick two distinctive features that are distinct between the two phonemes.
4. Create a two duplicates of one of the phonemes each with one of those distinctive features swapped.
5. Check if the resultant phoneme is valid and add to inventory if it is.
6. Generate one random phoneme and then pick one of the existing ones and repeat the process.
7. Stop when over the random number generated in step 1.

Maybe it would make sense to keep the first set of distinctive features so it is consistent throughout…

**Vowel Patterns**

* Rip off these maybe: <http://gesc19764.pwp.blueyonder.co.uk/vowels/vowel_systems.html>
* Fill corners, then edges, then middle up to number desired.
* Maybe decide overall structure (triangle, square, cubic, line) and then go from there.

**Vowel Generation**

For the pre-set method:

1. Pick a random inventory out of a pre-compiled list of vowel inventories.
2. Done.

For the fill method:

1. Generate random number.
2. If less than 4, pick three random corner vowels.
3. If equal to 4, pick the four corner vowels.
4. If greater than 4, pick the corner vowels and then pick randomly
5. Roundedness and unroundedness will be decided probably…
6. Hm.

For picking overall structure first…

I dunno.