2018-12-14

Structure of config files in [RSST97b] and [Stei09]:

```
1                          ; ID (to-do: replace with a “stable”/informative ID)
10 6 16 0                  ; N R A B
0                          ; RC
 1  3    2  9  6           ; vertex adjacency list starts here ..
 2  4    3  8  9  1        ; Example: node 2 has 4 neighbors: {3,8,9,1}
 3  4    4  7  8  2        ;
 4  3    5  7  3           ;
 5  4    6 10  7  4        ;
 6  4    1  9 10  5        ; last ring vertex 6 → {1,9,10,5}
 7  5   10  8  3  4  5     ; first (inner) config vertex
 8  5    7 10  9  2  3     ;
 9  5    2  8 10  6  1     ;
10  5    9  8  7  5  6     ; last config vertex
1024 1024 1024 1024 1024 1024 1024 1024
1024 1024
```

N: # of vertices in the free completion (total vertex count)
R: ring-size (so the inner part / config has vertex count K = N - R)
A: the cardinality of C, i.e., the number of colorings which extend to the configuration (pre-computed!? Where/how?). [RSST97] and [Stei09] use Tait (i.e., edge tri-)colorings, rather than vertex 4-colorings, so this number is probably in terms of the former..
B: [RSST97b]: the cardinality of C' ; see discussion before Sec. (3.2). [Stei09]: the size of the largest consistent set in the complement of the set of colorings that extend to the configuration (in [Stei09] always 0)
RC: **k [2*k integers]**; k is the number of edges in X, each edge being represented as a pair of integers [RSS97b]. [Stei09] writes: The contract (reducer), if any. Always empty (i.e., 0?)
Next: [RSST97b] the **adjacency list** of the free completion in a standard form (the second column contains the degrees in the free completion). In [Stei09]: ... the vertex adjacency lists are given, starting with the R ring vertices
Finally: [RSST97b] **coordinates** of vertices of the free completion; the i-th entry in the coordinate list is 1024 x + y where [x,y] are the coordinates of vertex i, (0 < = x,y < 1024)

- [RSST97b] Robertson, Neil ; Sanders, Daniel P. ; Seymour, Paul ; Thomas, Robin: **Reducibility in the Four-Color Theorem**, 1997. — arXiv: 1401.6481
- http://people.math.gatech.edu/~thomas/FC/fourcolor.html Robin Thomas’ 4CT page
- https://people.math.gatech.edu/~thomas/FC/ftpinfo.html explains config file format