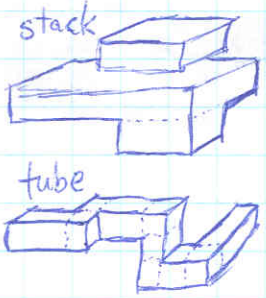
6.885
L11.3
Oct. 18, 2004

Unfolding orthogonal polyhedra = all faces perp. to axis

Orthostack = slice with any horizontal plane is connected

Orthotube = chain of boxes connected along faces



Grid unfolding = just use edges from grid:
slice with plane containing every face

- orthotubes have grid unfoldings [Biedl et al. 1998]

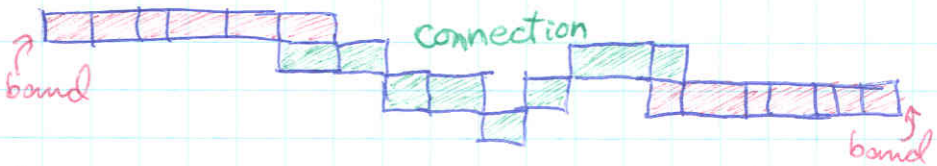
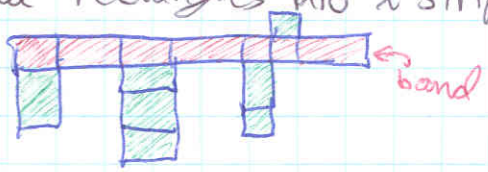
OPEN: tree of boxes?

- orthostacks have general unfoldings [Biedl et al. 1998]

OPEN: grid unfolding of orthostacks?

- orthostacks have grid vertex unfoldings [Demaine, Iacono, Langerman 2004]

Idea: – unfold each side band of each slab into strip
(need to specify where to cut band)
– cut bottom band arbitrarily – start, proceed cw. finish
– look at horizontal surface above "finish" rectangle
– take shortest path of rectangles to next band
– start band there, proceed cw, repeat



– coalesce remaining horizontal rectangles into x strips
– attach to adjacent band
(might be above or below)