Computation Mask

We need a computation mask
- user-specified mask
- hardware early pixel rejection
- reduces rasterization, shading, memory bandwidth

Early Z

Early Z test - Based on ideas of Ned Greene
- Tests a fragment or a tile (group of fragments) against the depth buffer. Does this before fragment shader. This is hierarchical!
- hardware early pixel rejection
- reduces shading, memory bandwidth

Early Z

Early Z test (fuzzy, not clear to me)
- Does not work if using Discard
- Does not work if writing gl_FragDepth
- Switching shaders is a problem
  - Early->Late OK
  - Late->Early not OK

Early Stencil

Early Stencil test (really fuzzy, not clear to me)
- Nvidia has a patent on this
- There are NDA documents but we don’t have those

Hardware Support

Current hardware doesn’t have computation mask
- but — hardware already has early z culling!
- minimal changes needed for native mask support
- our implementation uses a simulated mask
- They used EXT_Depth_Bounds test (which is a form of early Z)