# Forward Tracking Tiling issues

Digitization

- Working on code to handle various combinations of tilings in the forward disks.
- Will want to be able to study various combinations of pixel and microstrip tilings.

WedgeZPlane

- Allows one to construct a tiling of a disk with just a few input parameters:
    - number of annuli
    - number of wedges per annulus
    - inner radii of annuli
    - outer radii of annuli
    - phi offset of wedges in annulus
    - strip pitch
    - orientation of strips

Example Disk Tiling
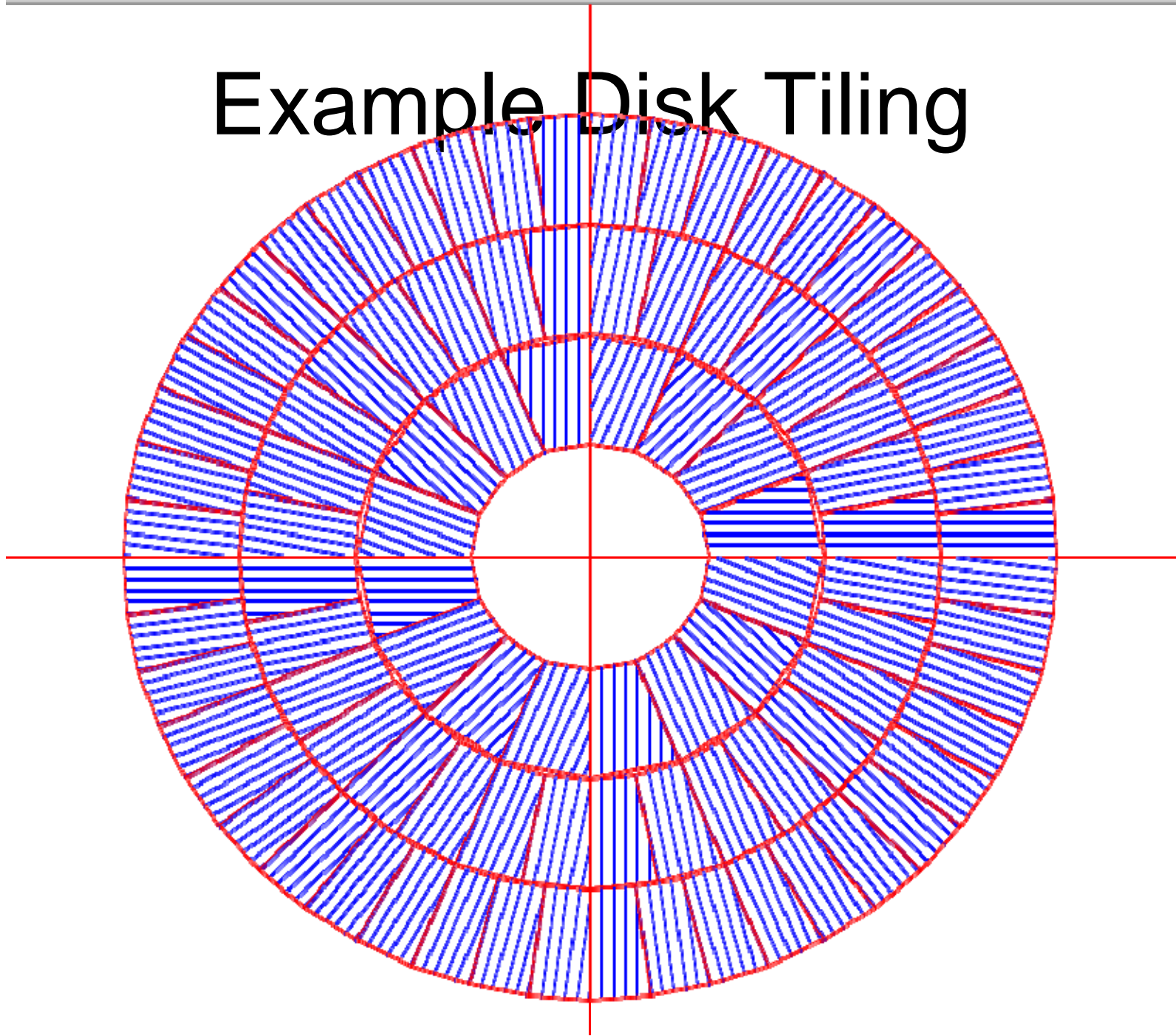
Demo Applet

- IDDecoders developed to convert $(x,y) \rightarrow$ ID, where ID encapsulates Wedge and Strip information.

- Wedge & Strip information can return line segment which represents strip hit.

Run Tiling Applet

Tracking strategies

- Current disks envision either double-sided or back-to-back silicon wafers, with offset pitch.

- Can form 3D spacepoints from intersections of strips, and use these in pattern recognition.

- Could also find tracks in VXD and project forwards, picking up single strips, without local hit resolution.

To do

- Digitize hits into readout strips, cluster strips and create strip hit positions and uncertainties.
- Study occupancies as a function of various disk-tiling geometries.
  - can introduce pixels into innermost rings if needed.
- Quantify number of ghost hits for various geometries.
  - Can we do standalone tracking in disks?
- Conduct studies with full backgrounds.