Note that the x-y plane is rotated from the usual for ease of depiction and description. The offset method identifies the 2D coordinates of each of right (r), front (f) and top (t) faces of a cube at (x,y,z). The 2D coordinates give the position of the face in the 2D tiling covering its plane.

A cube at (h,k,l) has each of its horizontal faces, which are Cross tiles, central in a 2D tiling (bigCross tiling) and each of its vertical faces central in 2D big Arrow tiling (2 pointing up and 2 pointing down). The major axes of these 2D tilings run along pairs of the 6 arms of the big structure. These structures are stacked in (1,1,1) direction (for ease of argument.)