gki2Ray.java

```
package gobalkrishnan_v_18_06_1995.dimension2;

import gobalkrishnan_v_18_06_1995.color.gkiColor;

public class gki2Ray {
 public double ox,oy,dx,dy;
 public gki2Point origin,direction,point;
 public gkiPixel pixel;

 public void ox(double x){
    ox=x;
    origin.x=x;
 }
 public void oy(double y){
    oy=y;
    origin.y=y;
 }
 public void dx(double x){
    dx=x;
    direction.x=x;
 }
 public void dy(double y){
    dy=y;
    direction.y=y;
 }
 public void gkiPixel(gkiPixel p){this.pixel=p;

 for(int i=0;i<p.viewWidth;i++){
    for(int j=0;j<p.viewHeight;j++){
      if(p.im.getRGB(i, j)!=0){
         gki2Point pi=new gki2Point(i, j);
         double l=origin.distance(pi);
```

```
            // System.out.println(l);
             gki2Point pw=new gki2Point(origin);
             pw=pw.addScaled(l,direction);
            //  System.out.println(pw);

             if(pi.x==(int)Math.round(pw.x) && pi.y==(int)Math.round(pw.y)){
                p.setARGB(i, j, new gkiColor(0xffffffff));
               /// System.out.println(i+":"+j);
             }



      }
    }
}


}
public void origin(gki2Point o){this.origin=o;ox=o.x;oy=o.y;}
public void direction(gki2Point d){this.direction=d;dx=d.x;dy=d.y;
}


public void set(gki2Point o,gki2Point d){
   origin(o);
   direction(d);
   directionNormalize();
}
public boolean intersect(gki2Point p){
    this.point=p;
    double l=origin.distance(p);
    System.out.println(l);
```

```
     gki2Point pw=new gki2Point(origin);
     pw=pw.addScaled(l,direction);
     System.out.println(pw);
     if(p.x==(int)Math.round(pw.x) && p.y==(int)Math.round(pw.y)){
        return true;
     }
    // System.out.println(pw);


     return false;
 }
public void directionNormalize(){
   direction.normalize();
   dx=direction.x;
   dy=direction.y;
}

}
```