

# The Mystery of the Elliptical Dot

## Xitron Navigator Technical Note

February 18, 2001

Once every couple of months we get a call from someone who is doing film output using an elliptical dot. The question usually revolves around which elliptical dot is best to use and what the differences are between the elliptical dots available in the Xitron Navigator RIP. Up until now our response was generally... "That's a good question." As anyone who has tried to research the elliptical dot in the Navigator manual knows there is little information on the different versions of the elliptical dot.

So, we're here today to clarify this longstanding mystery... to shed some light into the darkness that is the NavigatorNT elliptical dot.

In the Navigator separation settings you have 5 choices of elliptical dot, these can be broken into 3 categories. The first would be the standard elliptical dot group, that is Elliptical 1 and Elliptical 2; the second group would be the quadrangle elliptical dot group, or EllipticalQ 1, EllipticalQ 2; and lastly the parabola elliptical dot, which is EllipticalP. The numbers following the elliptical dot type also refer to differences between dot cell behavior.

**The standard group (Elliptical 1, Elliptical 2):** These are basically 'football' shaped dots, this is a very common elliptical dot and is often used for screenprinting or for offset printing where a lot of fleshtones are present.

**The Quadrangle Group (EllipticalQ 1, EllipticalQ 2):** These are 'diamond' shaped dots are sometimes requested by screen printers or gravure printers.

**The Parabola Group (EllipticalP):** This dot is sort of a rounded version of the standard elliptical dot. It is somewhere between the regular round halftone dot and the elliptical dot.

**The difference between 1 and 2:** You'll notice that the standard and quadrangle groups each have two dot shapes listed in them. The dots designated with the number 1 behave similarly to the NavigatorNT Euclidean dot. This means that shades above 50% will show a white dot in a black background, shades below 50% will show a black dot in a white background, and 50% is a checkerboard pattern. The dots designated with the number 2 behave like the NavigatorNT Round dot, the darker the shade the larger the dot. Because the elliptical dot is oblong and not symmetrical in four directions you can get some white lines appearing in darker shades.