



Figure 3 ANGLE TRANSLATION ERROR AS A FUNCTION OF AMOUNT OF ANGLE TRANSLATION

In Figure 3 we show the effect of different amounts of angle translation, Δ , ranging from -1 to -5 degrees. As would be expected, error is less for the smaller values of Δ .

Experience has shown that an error in the elevation angle on the order of 0.2 degrees will have a negligible effect on the appearance of the finished stone. This 0.2 limit is shown in Figure 3 as a dashed line. From Figure 3 we can conclude that we can safely use the "approximate" method of angle translation for the pavilion angles of most designs (where θ_{old} is between 38 and 57 degrees). However, for crown angles the situation is quite different. On crowns "star" and "break" facets often are up to 10 or 15 degrees different from the reference angle thus the error would not be negligible...the facets cut with the approximate angles would not meet properly until one had by "trial and error" determined a correction.

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