GRECO™ is a well-known code for high-frequency monostatic RCS prediction from perfectly conducting 2D or 3D targets. An original graphical processing approach is used for analyzing the geometry of the object. The algorithm has been published in the following papers:

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“GRECO: Graphical Electromagnetic Computing for RCS Prediction in Real Time”, J.M. Rius et al., *IEEE Antennas & Propagation Magazine*, Vol. 35, No. 2, April 1993, pp. 7-17

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“High Frequency RCS of Complex Radar Targets in Real Time”, J.M. Rius et al., *IEEE Trans. on Antennas and Propagation*
, Vol.41, No.9, September 1993, pp. 1308-1319

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“GRECO: Graphical Processing Methods for High Frequency RCS Prediction”, J.M. Rius, et al., *Annals of Telecommunications*, Special Issue on Radar Cross Section of Complex Objects, Vol. 50, no. 5-6, pp. 551-556, Mayo-June de 1995).

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“Shaped Reflector Antenna Analysis by Graphical Processing Methods”, J.M. Rius, M. Vall-llossera, C. Salazar, A. Cardama, *Applied Computational Electromagnetics Society (ACES) Journal,* Vol. 14, No. 2, pp. 45-51, July 1999.

This graphical approach may introduce small errors in the computation, in addition to that inherent to high-frequency approximations. Graphical processing errors are analyzed in the following paper:

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“Discretization errors in the graphical computation of Physical Optics Surface Integral” by Juan M. Rius et al., *Applied Computational Electromagnetics Society (ACES) Journal*, Vol. 13, No.

3, pp. 255-263, November 1998

In order to reduce discretization errors, **the graphical processing is made in a bitmap** located at the computer main memory, thus allowing a bitmap much larger than the available space in the computer screen, limited only by the available RAM memory. The bitmap is of rectangular shape with sides automatically adapted to the size of the target projection.