Forward Rasterization, by Paul Rosen

In raster graphics, rendering algorithms take as input a scene description and a desired view and produce an image by computing the color of each pixel on a 2D grid. Most interactive graphics applications rely on the feed-forward pipeline. The primitives are first forward mapped to the image plane by vertex projection. Then an inverse mapping from the image to the primitive is computed at rasterization setup. The mapping is used during rasterization to fill in the pixels covered by the primitive. This approach is efficient for primitives with sizeable image projections: the rasterization setup cost is amortized over a large number of interior pixels.

We describe forward rasterization, a class of algorithms designed to efficiently and accurately render small polygonal primitives. A forward rasterization algorithm has the following defining characteristics.
-Samples are generated by interpolation between the vertices of the primitive.
-Sufficient samples are generated to guarantee that each pixel covered by the primitive receives at least one sample.
-The position on the desired image plane of each sample is recorded with subpixel accuracy using a pair of offsets.
-After all primitives are rasterized and z-buffered, the final image is reconstructed/resampled using the offsets stored with each sample.