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(71) Applicant: SPINELLA IP HOLDINGS, INC. [US/US];
39 Spruce Lane, Colts Neck, NJ 07722 (US).(72) Inventors: GADDY, William, L.; 433 Raymondskill
Road, Milford, PA 18337 (US). SERAN, Vidhya; 1013
Cowboys Parkway, Irving, TX 75063 (US). NOWALK,
Stephen; 14220 Caroline Drive, North Huntingdon, PA
15642 (US). LIU, Yong; 15 Dolores Drive, Edison, NJ
08817 (US). RAMANATHAN, Childambaram; 53
Champlain Road, Monmouth Junction, NJ 08852 (US).(74) Agents: CAPPO, Raymond et al.; Lowenstein Sandler
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(54) Title: SYSTEM AND METHOD FOR HISTOGRAM COMPUTATION USING A GRAPHICS PROCESSING UNIT

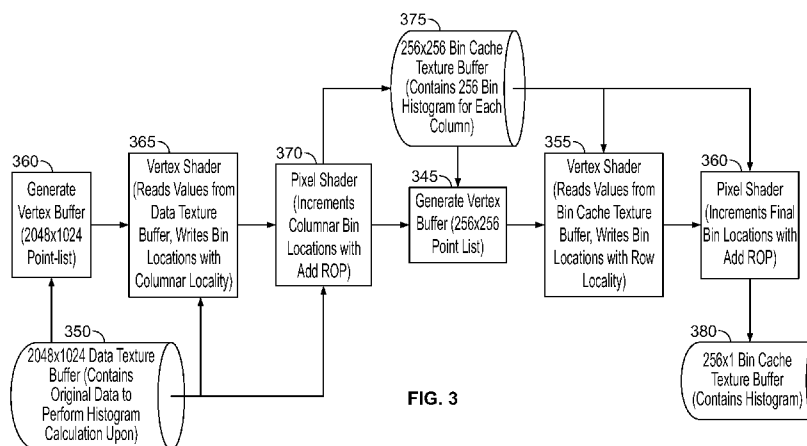


FIG. 3

(57) Abstract: A method and system for obtaining a histogram and related statistical values from a data set of texels is disclosed. A processing device receives from a first buffer, a data set of texels. The data set has a dimensionality D of at least two and each texel contains a value. The processing device sorts the data set into a point list of coordinates, wherein a point in the point list corresponds to a texel location in the data set. The processing device reduces the dimensionality of the point list by arranging points in the point list according to an N-1 dimensional dominance. The processing device performs a raster operation on each associated value of the arranged points to obtain at least one value. The processing device is to output the at least one value to a second buffer. The processing device may be a graphics processing unit.