



US 20240214511A1

(19) **United States**

(12) **Patent Application Publication**
MODY et al.

(10) **Pub. No.: US 2024/0214511 A1**

(43) **Pub. Date: Jun. 27, 2024**

(54) **DYNAMIC CONFIGURATION OF
PERSPECTIVE TRANSFORMATION ENGINE**

(71) Applicant: **Texas Instruments Incorporated**,
Dallas, TX (US)

(72) Inventors: **Mihir Narendra MODY**, Bengaluru
(IN); **Brijesh JADAV**, Bengaluru (IN);
Gang HUA, Katy, TX (US); **Niraj
NANDAN**, Plano, TX (US);
Rajasekhar Reddy ALLU, Plano, TX
(US); **Ankur ANKUR**, New Delhi
(IN); **Mayank MANGLA**, Allen, TX
(US)

(21) Appl. No.: **18/599,324**

(22) Filed: **Mar. 8, 2024**

Related U.S. Application Data

(63) Continuation of application No. 17/690,829, filed on
Mar. 9, 2022, now Pat. No. 11,974,062.

Publication Classification

(51) **Int. Cl.**

H04N 5/262 (2006.01)

G06T 3/40 (2006.01)

G06T 7/12 (2006.01)

G06T 7/60 (2006.01)

G06T 11/00 (2006.01)

(52) **U.S. Cl.**

CPC **H04N 5/2628** (2013.01); **G06T 3/40**
(2013.01); **G06T 7/12** (2017.01); **G06T 7/60**
(2013.01); **G06T 11/00** (2013.01)

(57)

ABSTRACT

A technique for determining regions and block sizes for configuring a perspective transformation engine including determining a set of scale ratios for images captured by a camera, generating a scale ratio image based on the set of scale ratios, determining a set of boundary ranges for the scale ratio image, generating a binary scale ratio image using the set of scale ratios of the scale ratio image, determining a set of regions based on the set of boundary ranges for the binary scale ratio image, determining a block size for each region of the determined set of regions, and outputting the determined set of regions and the determined block sizes.

