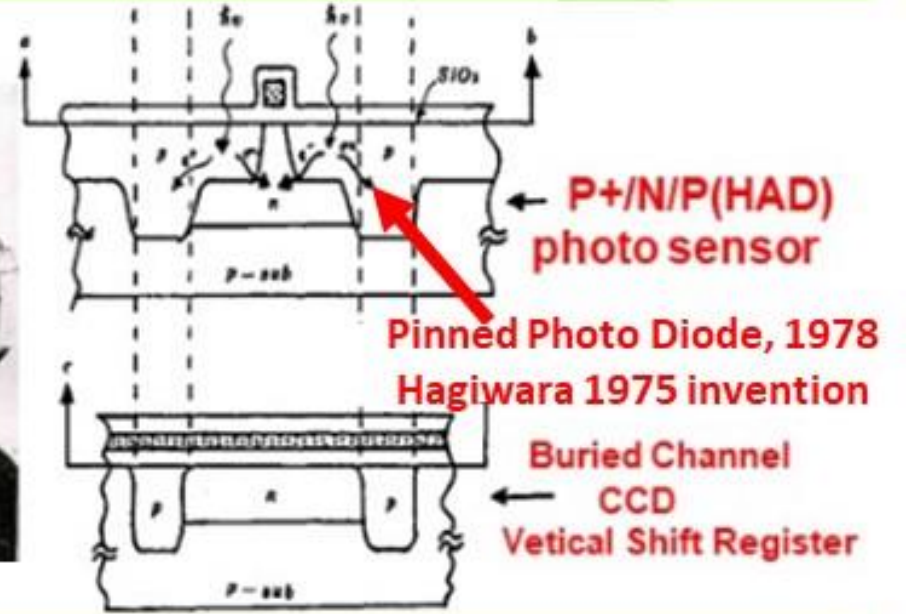


SONY original 570H x 498 V One-chip FT CCD Image sensor with Pinned Photo Diode, 1978

In 1978, at Sony Tokyo Press Conference by Kazuo Iwama, and at Sony New York Press Conference by Akio Morita,



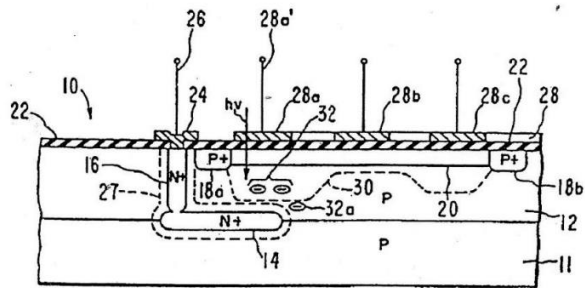
Sony announced the Video Camera and 8 mm VTR in one box.

Early Patent

United State Patent 3,896,485

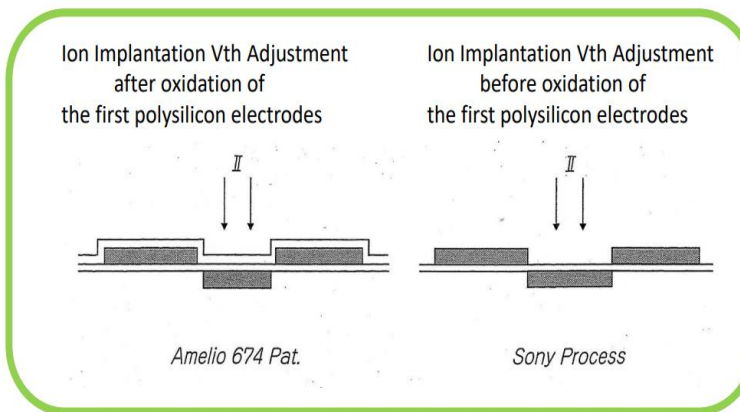
July 22, 1975

James M. Early (Fairchild Camera and Instrument Corporation):
Charge-Coupled Device with Overflow Protection



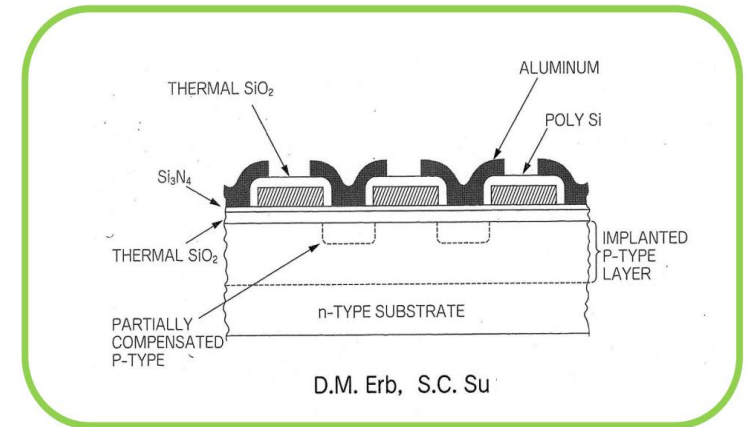
Fairchild claimed that the vertical overflow drain (VOD) structure with the punch thru operation mode of N+ overflow drain (OFD) region as the Fairchild original idea. The excess charge is drained to the silicon surface instead of the silicon substrate in this case.

Difference of Fairchild (Amelio) 1976 Process and Sony 1987 Process



Besides Fairchild (Amelio) 1976 Process and Sony 1987 Process had a big difference for manufacturability and yield considerations.

IEDM1973 Paper by Hughes Aircraft Company, D.M. Erb, W. Kotyczka, S.C. Su, C. Wang and G. Clough, "An overlapped Electrode Buried Channel CCD", IEDM1973, reporting the ion implantation of the Vth adjustment of electrodes of Charge Coupled Devices



D.M. Erb, S.C. Su