



A Novel Sensor For Earth Observation

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New Space Market

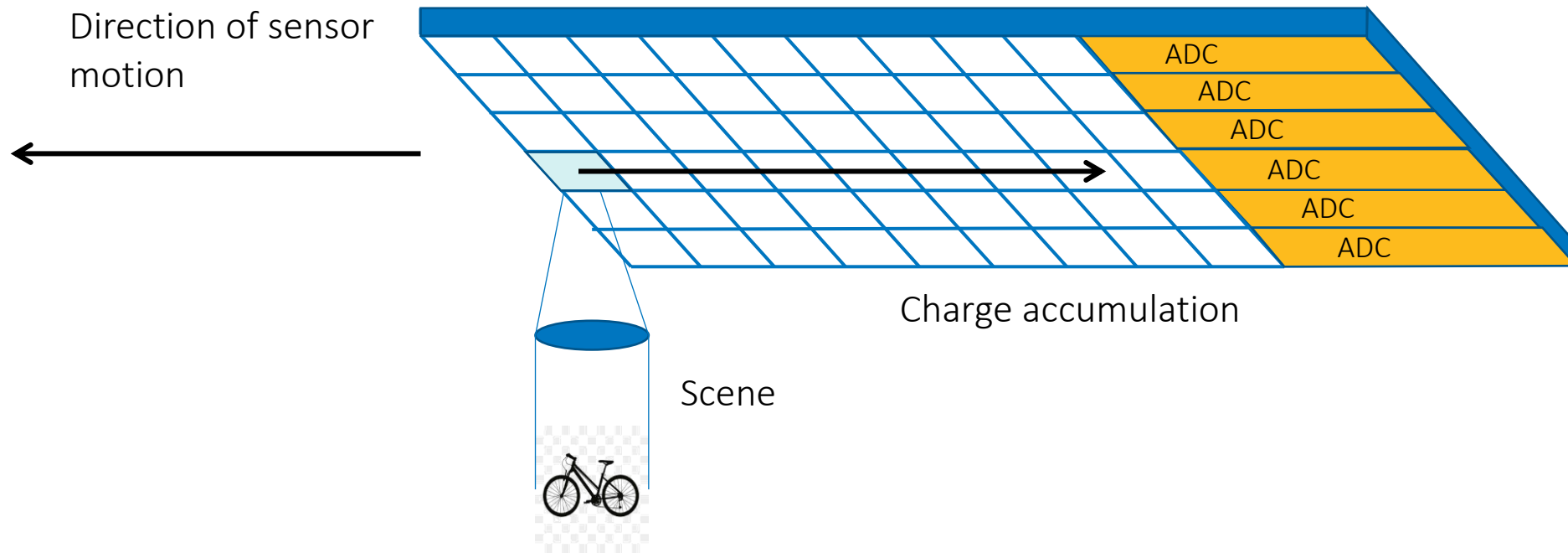
- Previous Very High Resolution imagery from Space, also very high cost!
- Growing demand for low cost, Very High Resolution satellite imagery
- (Imagine what would be possible if Google Earth were 'live'!)

- We are proposing a sensor that will enable Very High Resolution and Low Cost

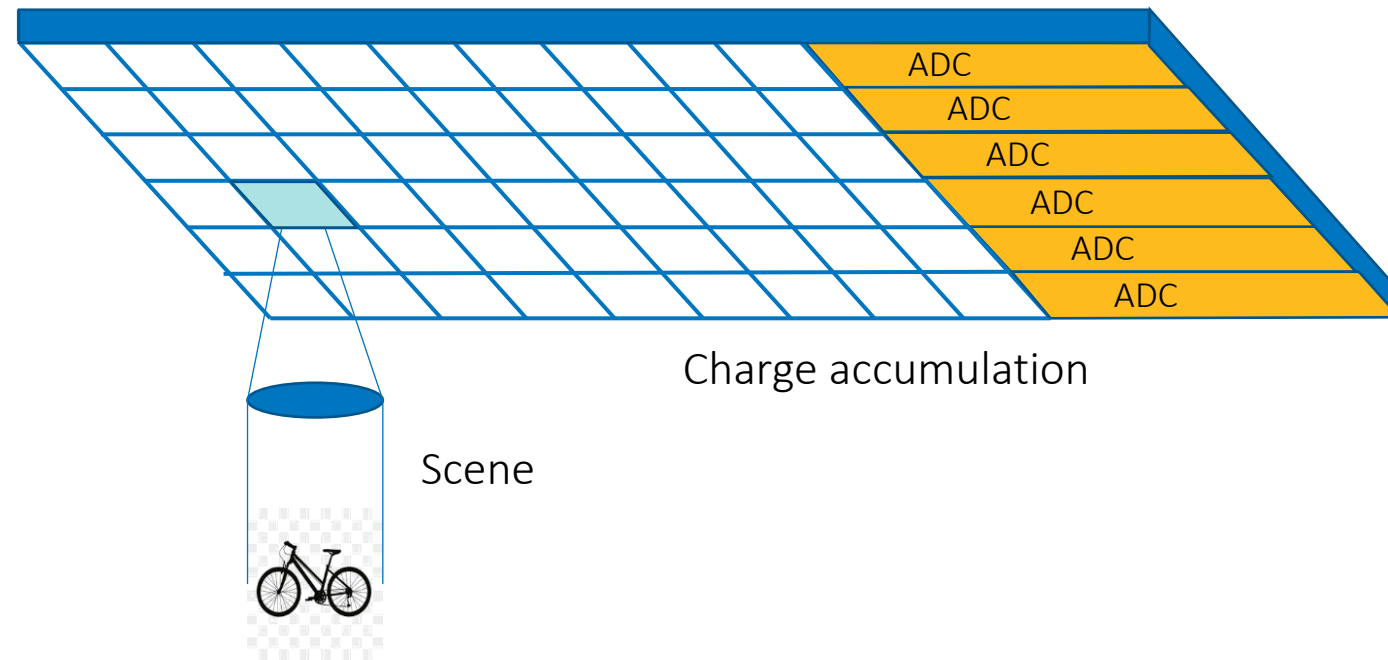
TDI CMOS

- (Time Delay Integration Complementary Metal Oxide Semiconductor)
- Transfers charge like CCD (older technology), but has all the advantages of CMOS

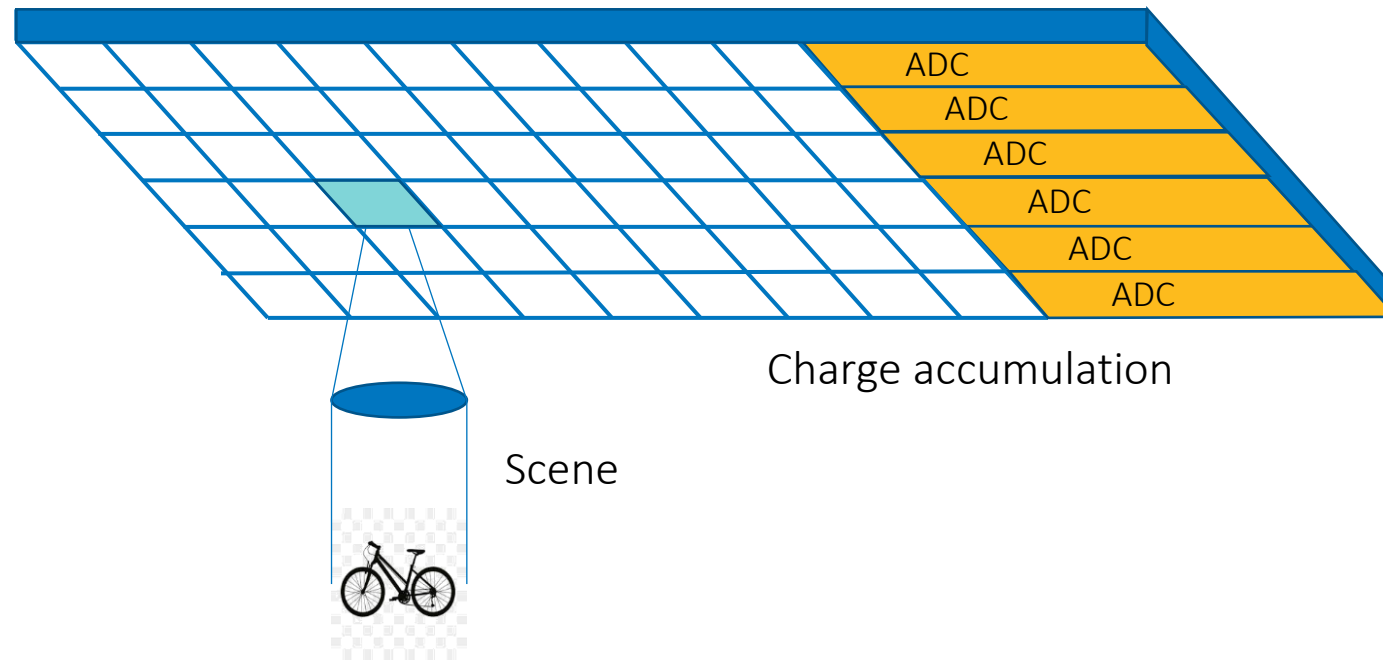
Charge Transfer in TDI CMOS



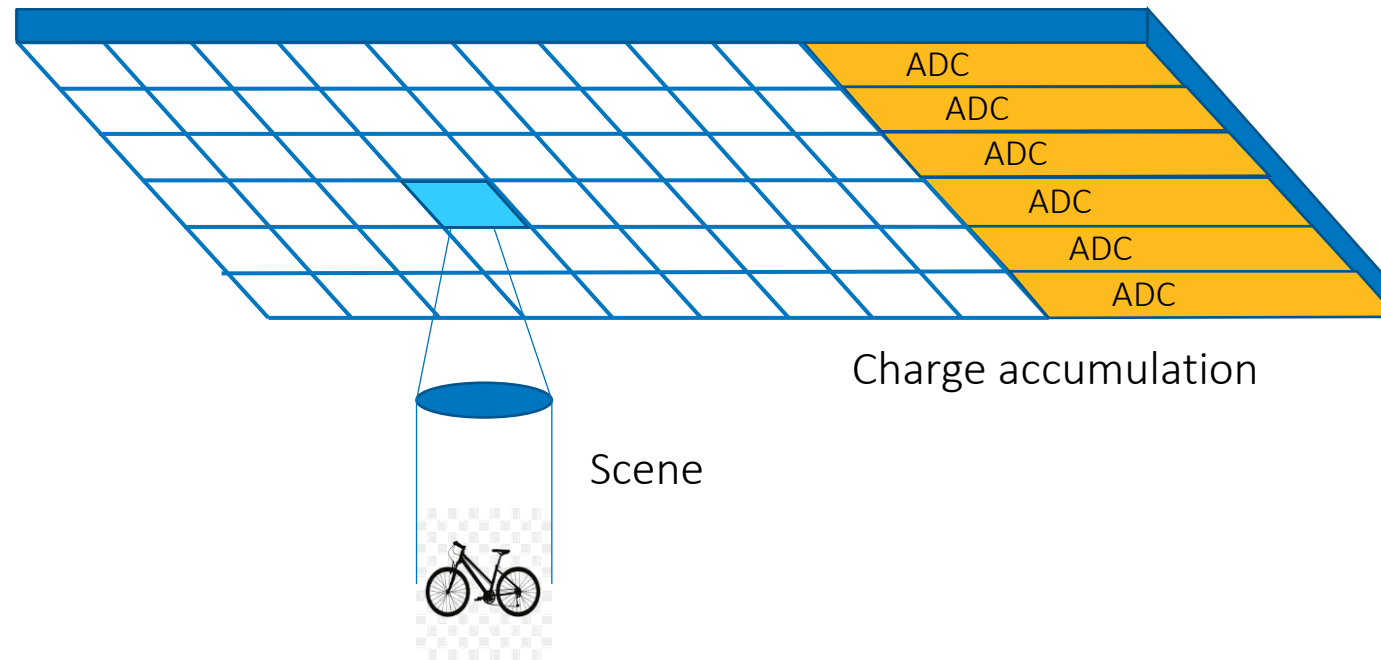
Charge Transfer in TDI CMOS



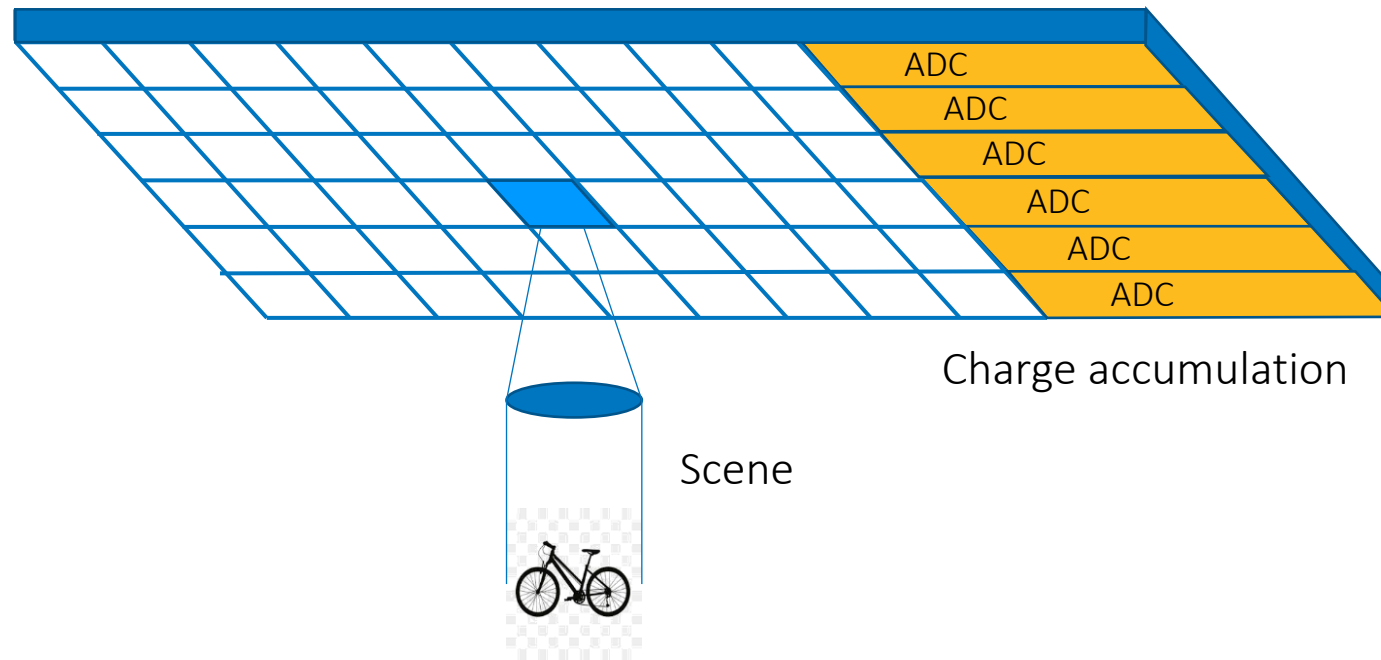
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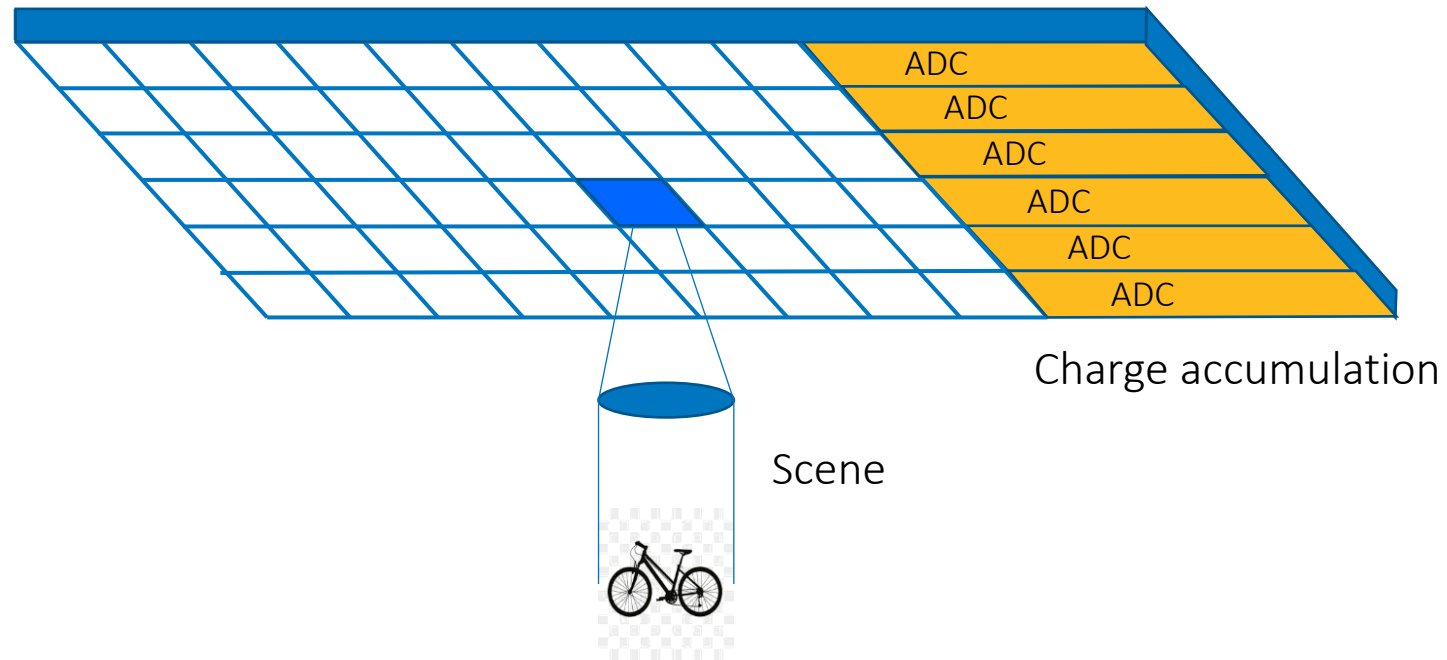
Charge Transfer in TDI CMOS



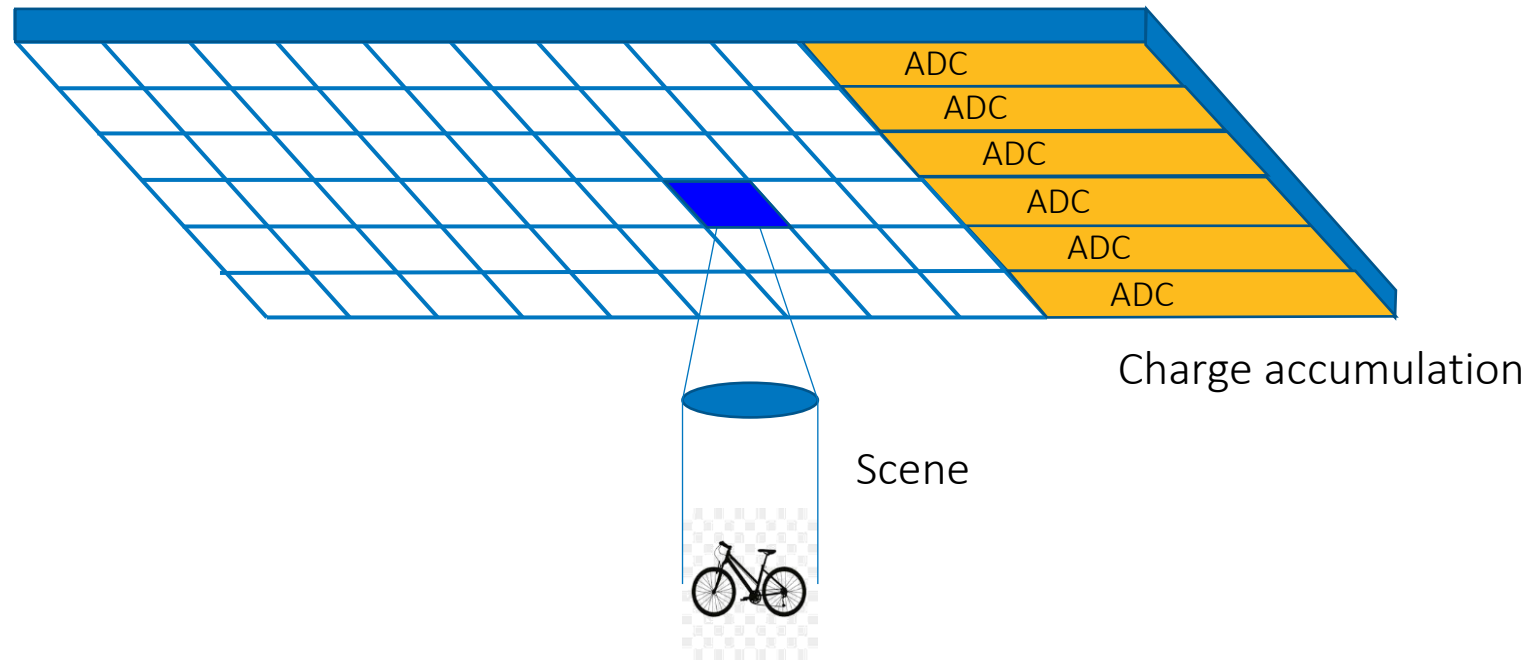
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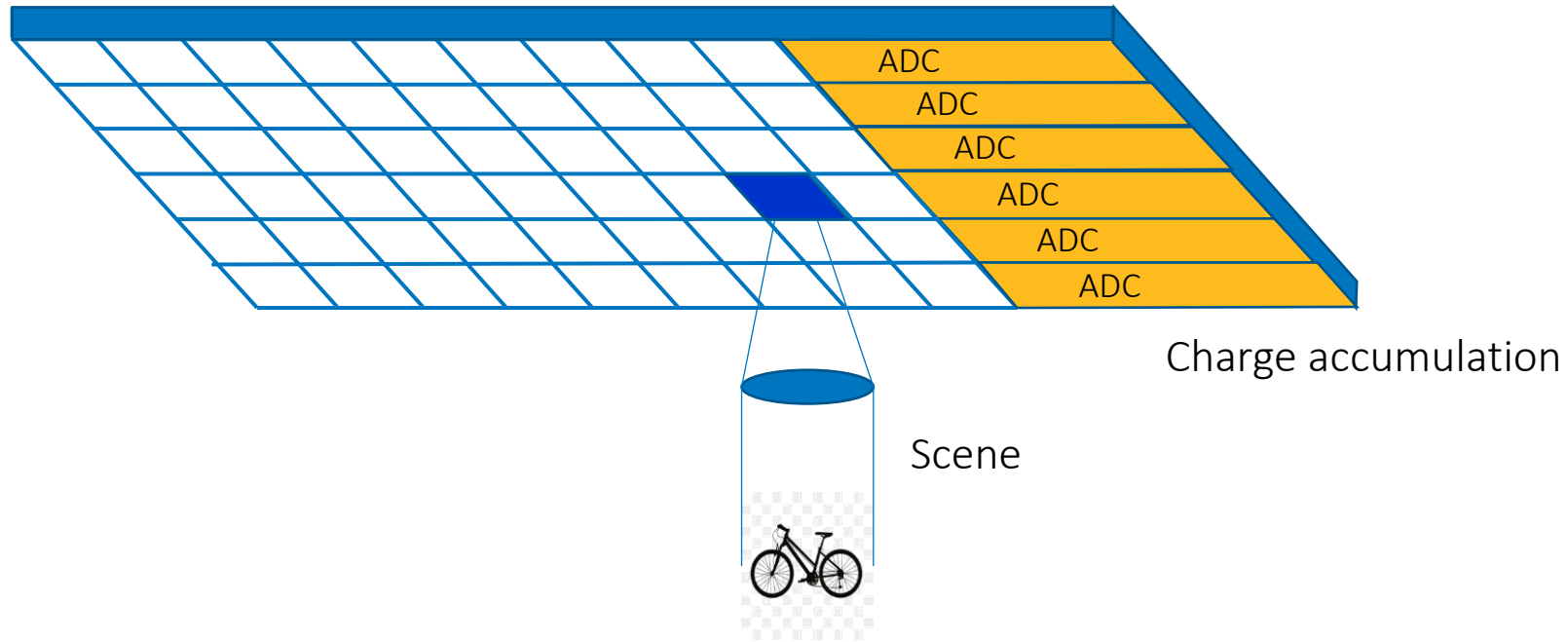
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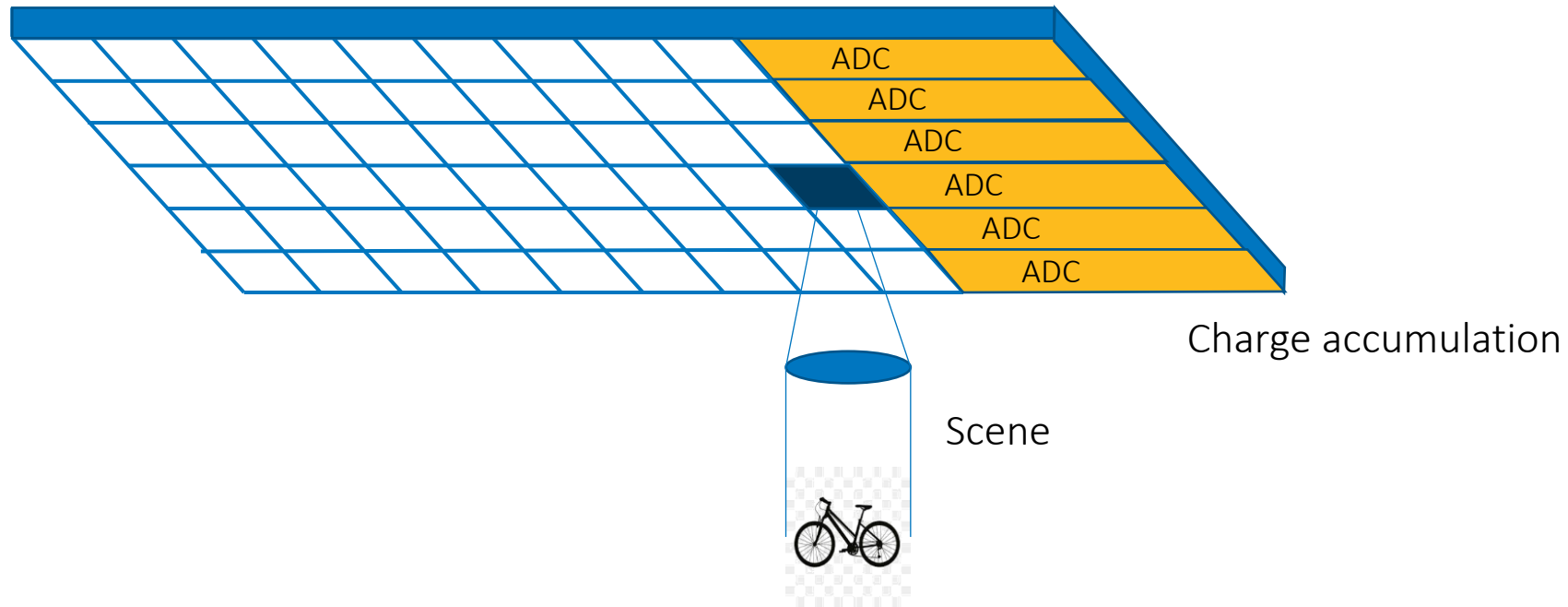
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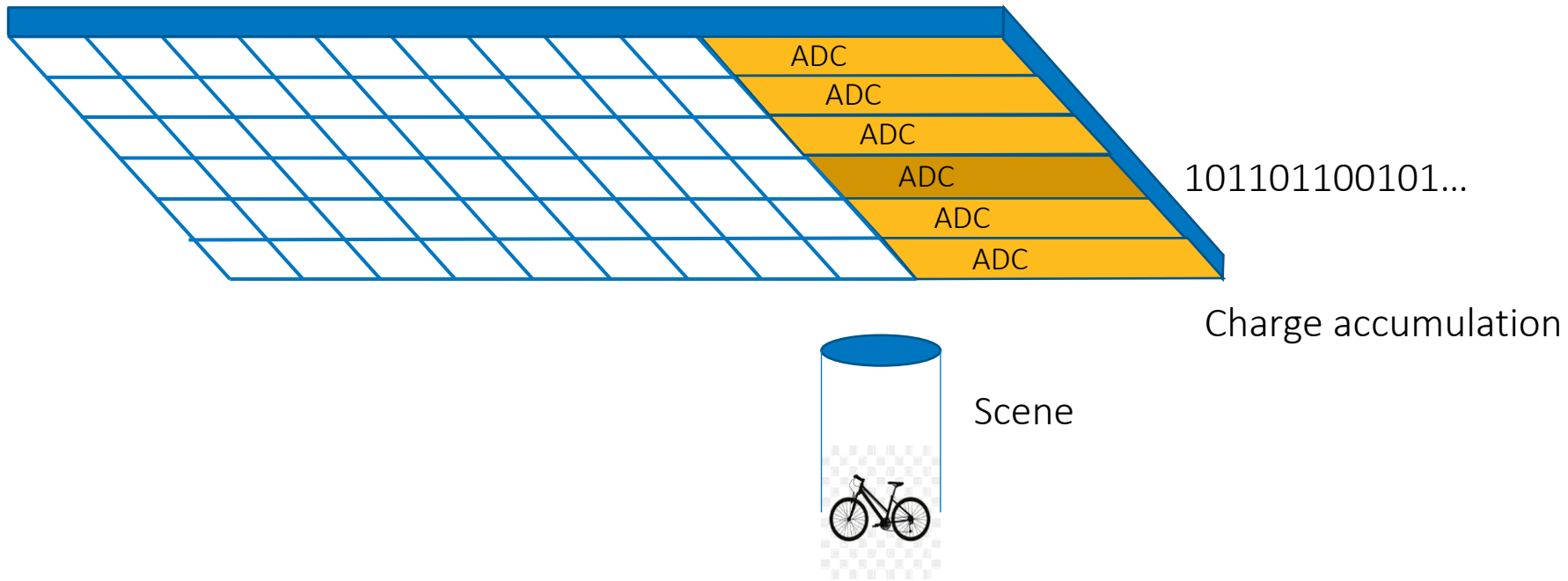
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Collaboration between Teledyne e2v, Surrey Satellite Technology Ltd & Centre for Electronic Imaging

Design and manufacture device suitable for space application based on previous test chip

Characterisation testing and performance after radiation

Integration into an instrument for further testing

By completion, we will have demonstrated the suitability of the subsystem for space applications