

ABSTRACT

A SIGNAL PROCESSING SENSOR USING CCD's

by

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A new signal processing sensor is possible using a combination of charge transfer devices and signal processing concepts which simultaneously measures the incident optical signal and performs a linear transformation upon that signal. This paper will discuss possible implementations and the types of transforms which may be performed. It appears possible at this time to perform the Discrete Fourier Transform in a linear imaging device. Extension of the concept to a two-dimensional array may be feasible.