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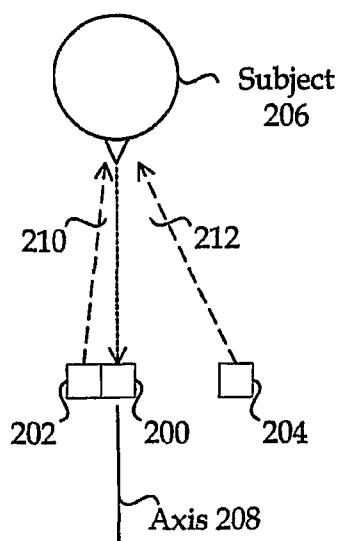
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(54) Title: METHOD AND SYSTEM FOR WAVELENGTH-DEPENDENT IMAGING AND DETECTION USING A HYBRID FILTER



(57) Abstract: An object (206) to be imaged or detected is illuminated by a single broadband light source or multiple light sources emitting light at different wavelengths. The light is detected by a detector (200), which includes a light-detecting sensor (400) covered by a hybrid filter. The hybrid filter includes a multi-band narrowband filter (516) mounted over a patterned filter layer (508). The light strikes the narrowband filter (516), which passes light at or near the multiple wavelengths of interest while blocking light at all other wavelengths. The patterned filter layer (508) alternately passes the light at one particular wavelength while blocking light at the other wavelengths of interest. This allows the sensor (400) to determine either simultaneously or alternately the intensity of the light at the wavelengths of interest. Filters (902) may also be mounted over the light at the light sources to narrow the spectra of the light sources.