performing change detection algorithms whereby a collected geospatial image is compared to a reference geospatial image extracted from a pre-existing 3D scene model through a synthetic camera which is created and placed in the scene in such a way as to match the collected image sensor's location and parameterization (e.g. field-of-view, hyperspectral vs. monochromatic, etc.). Further, relevant known "real-world" phenomenology such as atmospheric and time-of-day effects, overall ground lighting/reflectivity properties (e.g. ocean vs. dense forest) can be simulated in the scene before the reference geospatial image is used for change detection to thereby improve results. The disclosed systems and methods may permit total freedom in virtual sensor positioning for reference image extraction, total freedom in sensor parameterization (i.e. sensor modeling) including spectral components. Other aspects of the systems and method disclosed herein may be understood with reference to related copending applications entitled: "ACCURACY ENHANCING SYSTEM FOR GEOSPATIAL COLLECTION VALUE OF AN IMAGE SENSOR ABOARD AN AIRBORNE PLATFORM AND ASSOCIATED METHODS", having attorney work docket no. 51450, 11/328,676 "GEOSPATIAL IMAGE CHANGE DETECTING SYSTEM WITH ENVIRONMENTAL ENHANCEMENT AND ASSOCIATED METHODS", having attorney work docket no. 51452, 11/328,677 and "GEOSPATIAL IMAGE CHANGE DETECTING SYSTEM AND ASSOCIATED METHODS", having attorney work docket no. 51451, 11/328,669 the entire disclosures of each of which are incorporated herein by reference.

Change(s) applied to document, /M.I.G./ 1/31/2013

[0042] The various databases, image processors, change detectors, and other components described herein may be implemented using programmable digital computing hardware and software as will be readily appreciated by those skilled in the art. Of course, dedicated circuit