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(54) Title: METHODS FOR ASSIGNING ATTRIBUTES TO AN IMAGE OF AN OBJECT SCANNED WITH IONIZING ELECTROMAGNETIC RADIATION

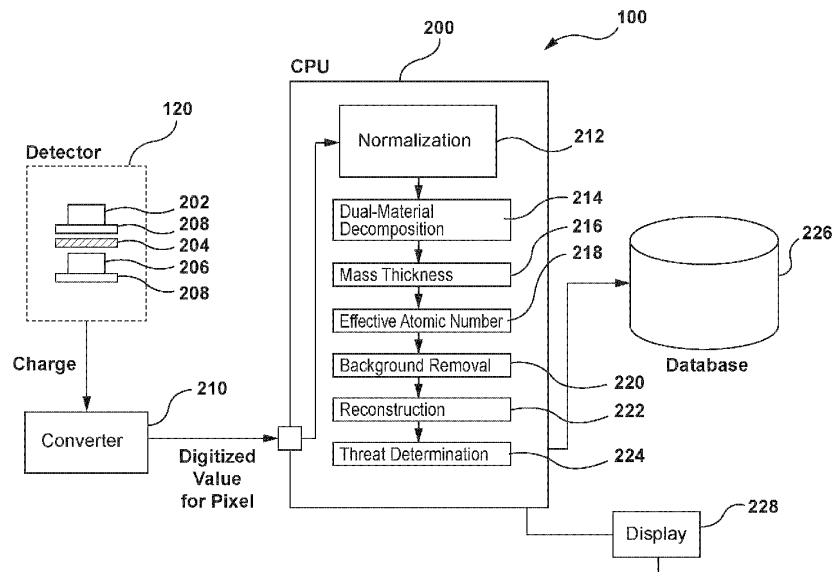


FIG. 2

(57) Abstract: There is provided a method for assigning an attribute to x-ray attenuation including scanning in an x-ray scanning device first and second reference materials each having known atomic composition, dimensions and orientation in the scanning device. The device emits x-rays which pass through the first reference material with first reference material path lengths and the second reference material with second reference material path lengths. The x-rays are detected by detectors to provide a plurality of dual-energy attenuation images having dual-energy x-ray attenuation information. The dual-energy x-ray attenuation information in the dual-energy attenuation images is associated with the first and second reference material path lengths. Then, each of the first and second reference material path lengths are expressed collectively as a function of the associated attenuation information to define attenuation surfaces upon which may be imposed dual-energy attenuation values to determine corresponding first and second reference material equivalent path lengths.

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