

Title (en)
COMPUTED TOMOGRAPHY APPARATUS AND METHOD FOR CLASSIFYING OBJECTS

Title (de)
COMPUTERISIERTES TOMOGRAFIEGERÄT UND VERFAHREN ZUM KLASSIFIZIEREN VON OBJEKTEN

Title (fr)
APPAREIL DE TOMODENSITOMETRIE ET PROCEDE DE CLASSEMENT D'OBJETS

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- US 2188998 A 19980211
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Abstract (en)
[origin: WO9941676A1] A method and apparatus (100) for detecting objects (112) in computed tomography (CT) data are disclosed. Sheet-shaped objects such as sheet explosives can be detected by analyzing the density of test voxel and mean density of its neighborhood voxels. Sheet objects can also be detected by performing erosion and dilation operations. A corrected mass using the mean eroded density of the object can be computed and compared to mass thresholds to classify the object as to whether it poses a threat. Bulk objects can be detected by a modified morphological connected component labeling (CCL) approach which performs a series of erosion and dilation steps to separate adjacent objects in the data such that they can be individually labeled and analyzed. The system can also identify objects that contain liquids. The overall system performance, including overall object detection rate and false alarm rate, can be adjusted by adjusting individual object detection rate and/or false alarm rates.

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