

System for object identification and content quantity estimation through use of thermal and visible
spectrum images

5 **ABSTRACT**

According to a first aspect of the present invention, there is provided an object profiling
system comprising: a visible spectrum camera; a thermal camera, wherein the visible light spectrum
camera and the thermal camera are disposed to capture a common zone; and a processor configured to:
10 receive a stream of visible spectrum images and thermal images of the common zone, taken
respectively by the visible spectrum camera and the thermal camera, when an object is detected to
pass through the common zone; and isolate the object in the visible spectrum images through cross
reference against co-ordinates of its thermal silhouette found in the thermal images. A second aspect
has an object profiling system that has a thermal camera and a processor that determines a percentage
15 of content remaining in an object based on its thermal images taken by the thermal camera.

Figure 1