

Abstract**An Intelligent Apparatus for Surgical Device Visualization and Localization**

5 The present invention relates to an intelligent surgical device visualization and localization apparatus to enable the surgeon viewing the surgical procedure inside the patient organ or body and localizing the surgical device more accuracy. The apparatus comprises three functional components, augmented virtual-reality based visualization unit, robotic manipulator and floating table,
10 together with a set of templates for different surgical procedures. The apparatus can carry a surgical device performing parallel shape, corn shape and parallel-corn shape hybrid operation for surgical procedure inside the patient organ and body. The apparatus is possible to work with any medical image system such as cancer visualization and localization system to perform therapeutic
15 procedure more accurately, safely and effectively. In additions, all of the information can also be saved in digital format to review later, which can perform an effective procedure for active surveillance on the healthcare and perform the best procedure for the therapy.

20 [Fig 1]