Application No.

PI1 Name:

Scientific abstract –The Refractive Periscope – a Novel Concept

A periscope is an optical device whose function is to allow sighting of objects that are not in direct line of sight with the observer Eye/ Screen/ Detector. The concept behind the periscope is tilting the optical axis by breaking the rays of light with a mirror or prism so that the image is obtained in the desired location.

The periscope has a variety of uses, many of which belong to the military realm. For example, observing from submarines above the sea level surface, looking at the war zone from inside of a tank, directing light into hidden places and more.

In this application, the researchers are reviewing a new development based on wave guide concept and ray directing methods which composes a tube with light reflective walls. This allows us to build a significantly Small-dimensional periscope with respect to a standard periscope that does not use lenses. The authors will also review a number of applications suitable for the reflection periscope.