

Collision Avoidance with ILT



MagikEye has developed Invertible Light[™] (ILT) 3D sensing sensors with **small size**, **fast speed**, **low latency** and **low power consumption**. These sensors can be attached around the object of interest and sensed 3D data used to guard the object and **prevent** the **collisions**.



ILT001 sensor + Raspi



Example of 8 sensors around object to guard



Original/Potential Field of Application



- The technology was developed for the efficient 3D sensing and yields to **faster** and **low power** consumptions 3D sensors.
- The sensing technology can be combined with various cameras, projectors and CPU units that yields to big adaptability.



- Various sensors can be attached around the object and **provide distance** to other objects around.
- API in C++, Python. For example, ESRF is using BLISS to process our 3D data for collision avoidance
- Easy custom design of sensors and settings.
- The output can be seen realtime and remotely.







Proposal SWOT Analysis



Strengths

- Real-time 3D visualization of the environment
- >200fps fast and low power consumption sensors (depends on custom requirements)
- Adaptable settings (size, FoV, number of sensors)
- No visible light needed

Opportunities

- 3D Guarding of objects for collision avoidance
- 3D visual observation of objects
- Real-time and remote reporting of distance to objects

Weaknesses

- Collision avoidance solution is usually adjusted for the specific use-case.
- Sensors at static positions (update requires recalibration that can be done by user)
- Additional cables (possibility of wireless remote), additional HW

Threats

- Sensors can show up from the object (depends on the custom design)
- Can infer with specific light equipment at the same wavelength (e.g. 850nm)







IPR Status & Contact Information



- The technology is the intellectual property of MagikEye Inc.
- The technology is protected under patents

- For further information visit: <u>https://www.magik-eye.com/</u>
- We are always interested for any discussion and collaboration

