This project is a combination of both RFID, radio frequency identification, and a ZigBee based mesh network to provide wire free tracking of objects. ZigBee, which is an open and global standard for wirelessly networked control and monitoring solutions that is reliable, cost-effective, low-power. ZigBee utilizes IEEE 802.15.4 compliant radios operating in the 2.45 GHz spectrum.

ACHIEVEMENTS
- Designed the ZigBee boards based on an earlier Clarinox blueprint and has written their firmware.
- Debugged and improved the Clarinox RFID active tag and reader circuits, redesigned the printed circuit boards.
- Written the monitoring station software and localization algorithm.

FURTHER WORK
- Localization accuracy can be improved.
- Multi-Asset tracking can be introduced.

SOFTWARE ASPECTS
- The concept behind the localization algorithm is Triangulation.
- The position can be determined if distances from at least three known points.
- To calculate distances, received RSSI-to-distance conversion ratios is used.

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