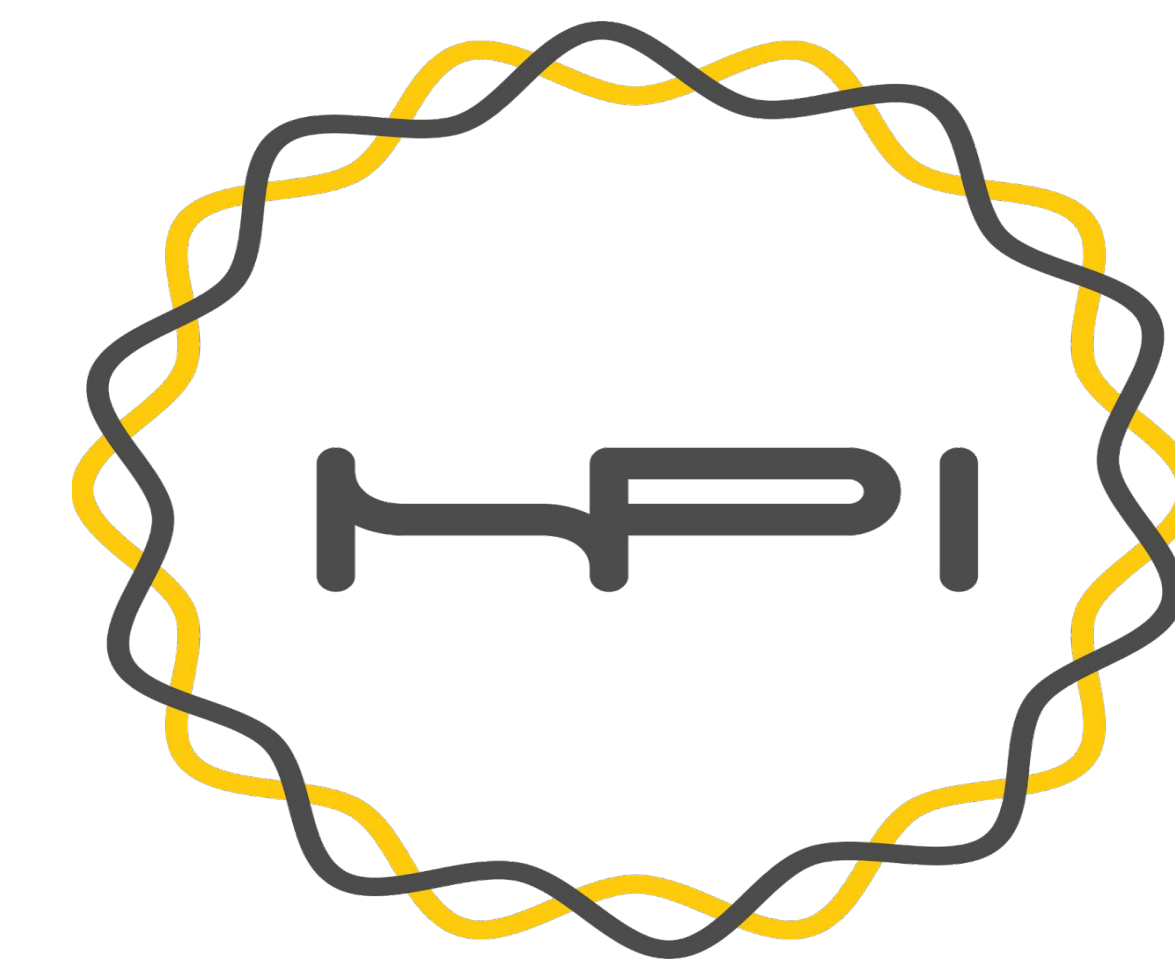# 21 - Combined GPS and Intensity-based Alignment of Laser Devices

Hansen Photonics Inc and Track Tech

- **What?**
  - ■ We will design and test software, which utilizes GPS, that enables devices to align and form a stable optical connection (via lasers).
- **Why?**
  - ■ Optical transfer allows for far greater data transfer capacity versus using standard methods.
  - ■ It is cost effective and environmentally friendly.
  - ■ This will be applied to increase data transfer speeds networking systems (i.e. server racks)
- **How?**
  - ■ Installing and interfacing with a GPS unit in each device prototype.
  - ■ Writing C++ code to execute on the arduino board, which will facilitate the alignment process at varying degrees of misalignment.

Photo example of two prototype devices aligning using lasers →