Hello

As a follow up message about the proposal, I wanted to give better detail on what we currently use and how we "make it work"

We are an oilfield related service company who measures casing that gets put in the ground. We currently have a semi modified **Disto D8** (*now discontinued. A website to give a good detail on its specs can be seen here: https://www.distagage.com/Disto-D8-p/764558.htm*).

By "semi" Modified, we mean we haven't modified any code, or made in internal changes to the device, but have made several mechanical (physical) blocks to features and have incased the device in our custom housing to operate.

The Disto D8 as it currently in use in the field, we measure through the pipe in question (which the inner diameter of pipe changes on a job by job basis and can range from 2" to up to 20") and the lengths recorded can range from 30' to 50'.

To be with in the standard tolerance of the Disto D8, our accuracy of the laser sensor must be within .004' *(we record in hundredth feet {EX: 41.25'} so the device must round up or down to the hundreds place for our purposes).*

We have developed a holder for the Disto to center it within the pipe with various size attachments for different size inner diameter casing (pipe). Once laser is properly affixed to casing (pipe) we turn the laser on and a second person is on the opposite side of pipe with a sheet metal plate. When operator on other side of plate verifies laser is running center of casing (not bouncing off side wall) they tap the plate flush to end of casing. The audible sound of sheet metal taping flush to pipe is heard by operator of laser, the laser operator can take a measurement and move on to next joint and repeat process until all joints are measured.

The Disto we use also has a camera display to show a crosshair target if needed to see down the casing (pipe), and a digital off set to enter thread loss (meaning the final measurement needed is of what it would be tightened together. The casing in question has a threaded male and female end which are tightened together to be run in hole The physical end to end points measured include male threads, which need to be removed, but we use an agreed upon API thread loss chart to keep a predetermined offset on each thread type used. The API thread loss is different for each thread of which there are many different thread types.)

Once measured, the disto has a "save file" to which we use their software "Disto transfer" to dump via Bluetooth to a prefilled excel template, and email that excel file to those who need its contents.

OUR REASONING FOR CREATING A NEW DEVICE is as follows:

The Disto in question can only “save” the last 30 measurements taken, and overwrites previous saved measurements and unless you stop and dump them into our spreadsheet they will be erased as the new measurements overwrite them. This is an extreme time waste for us as we have jobs that maybe up to 400+ individual joints of casing to measure. We NEED a device capable of saving more than 30 joints at a time.

The device also has many options that are deemed unnecessary and even detrimental to our service.
Examples are:

The angle finder/level

Pythagorean Theorem equation

Preset orientation switch to start “0” end point from different point of the measuring device itself, such as top of device, bottom of device, and the brass insert you can mount on a tripod. This is a problem because when turning device on/off it always resets to indicate “0” starting point at back or device, but our holster set up needs a “0” starting point to be at front. We have had operators in the past “forget” to set the offset to be “0” to front of the device and measure and entire job wrong. Our work around to account for device itself (.47’) in combining with thread loss offset (EX: thread loss of .40’ plus unit measurement of 0.47’ equals entering a -.87’ offset for job.) I hope this illustrates how inconvenient this is.

A magnetic switch to indicate if a tail is flipped out in order to start a measurement in the corner of a room. This is a problem because when working in the oil field it is possible to get magnetic field communication interference and “turn the tail switch on” while still closed. Our work around is to hold a magnetic in our hand and force switch back closed.

The Bluetooth connection for this device has been deemed to potentially inconsistent in the field to be relied on and requires too much troubleshooting to “make work” by operators in the field. Our want is a cord connection to connect to laptop in field and transfer to excel spreadsheet. (If it determined to find a “bulletproof” version of porting the info to the field computer via Bluetooth, we of course, will listen to that plan.

IN CONCLUSION:

-We need a device that has all features from original posting,

-A “disto style” laser (we have found sensor modules from Alibaba, such as https://www.alibaba.com/product-detail/PD-520N-Cheap-200M-Digital-Distance_62221915870.html?spm=a27aq.14001196.62221915870_55.1.7d442af2OZTIQr which theoretically have no problem buying, and pulling the sensor from and installing in new system, or buying just module separate https://www.alibaba.com/product-detail/OEM-precision-rs232-

laser-rangefinder-sensor_62466612559.html?spm=a2700.details.deiletai6.2.1dcc186565ScNz but we are not limited to imports, and can use other more locally sourced sensors)

-Measurements that can be logged and transferred to a work laptop. We would like to keep this device as “dumb” as possible if only purposely not have as “all in one” (keep spread sheet off on separate laptop) to allow users in filed to comfortably review their work before emailing to people in need.

-If possible, we would like to have the “loss offset” data base built in to device (for example by choosing 7” Buttress casing -.38’ would be starting point for device, etc.)

-We want the device to have an on/off switch-button

-a measurement button which takes the measurement and displays on screen

-a send to “save” file button which saves the measurement currently displayed on screen

-the display to have an active “counter” of quantity of measurements currently “saved”

-and if we are able to source a laser module with attached camera, we would like to display the camera view to screen to aid in centering laser to target

I will also be including pictures, video of our current version to aide in grasping our use of our current system.

Thank you.

Video able be seen at:

https://youtu.be/HxrBTLx_Aag