Customer

A US Based company that focus on Inventory Management Services.

Problem Statement/Requirements

The customer's primary business is to collect and manage inventory information. The starting point for this is the actual scanning of tags on the objects, which is a highly labor intensive and tedious process. This job is often executed by the casual labor with minimal training and process control. A reliable and capable tool was required that suites all the usage environments encountered in this line of business.

The challenges included:

- Minimally trained casual labour
- Chance of careless and abusive handling
- Body stress due to long term and repetitive usage
- Wide variety of tagging methods
- Wireless networking within vast indoor spaces.
- High Electrostatic Discharge levels encountered.

Solution Methodology

SFO developed a handheld platform based on a quad core ARM application processor that runs Windows CE. A 2D code imager is chosen as the sensing technology, which supports all 2D coding technologies possible in the present and future. WiFi technology with high gain omni directional antenna is used as networking technology. To avoid body stress, the imager module is built into a light, finger mounted device that communicates with the mainframe handheld via Bluetooth. This module can also be plugged into the mainframe, to form an integrated imager.

Various methods are developed to address the careless and abusive use, including strengthened LCD screen, special break-away connectors, impact absorbing sheaths etc. The internal electronic design is optimized to support the higher ESD levels.

During the proses of this product development, SFO created a couple of IP / patents for the customer

Brief description of product:

a) **Hardware**

The system is built based on a Quad code ARM Application processor, with 1 GB RAM and 4GB flash storage. The WiFi and Bluetooth connectivity are supported by certified modules.

b) **Software**

The system runs Windows CE 7.0 Operating system. Custom application software developed by the customer implements all the necessary functionalities.

Impact

a) Patents for the customer
b) Supports inventory collection in retail, warehouse and logistics environments..
c) Supports employment of minimally trained workforce.
d) Supports careless and abusive usage environments
e) Survives high levels of Electrostatic Discharge.

About SFO

SFO Technologies Pvt Ltd, the flagship arm of the diversified conglomerate, the NeST Group provides end-to-end design-engineering-software-manufacturing solutions to clients across geographies such as the USA, Canada, Europe, Middle East, South East Asia, Japan, Australia, and India. SFO has invested in building competence, scale and standards compliant process framework, in PCBA, fibre optics, Cable & wire Harness, Magnetics, High Level Assembly, VLSI design, embedded software development, etc. SFO's capabilities transcend the plain vanilla "Build-to-Spec or Build-to-Print" EMS and our ODM+ solutions are rapidly re-defining standards for the OEMs across Aerospace & Defence, Communications, Transportation, Healthcare and Energy & Industrial domains. .