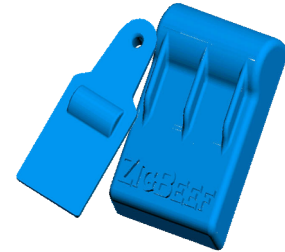


SLA[®] Used in Agricultural Application

ZigBeef, LLC founder John Hassell came to American Precision Prototyping, LLC (APP) with an idea for a new cattle tracking system. The tracking system would combine a long-range, omni-directional USB handheld reader and a Radio Frequency Identification (RFI) tag to record and store information such as the animal's ID number, vaccination records, and other data.

APP produced the initial prototypes from Stereolithography (SLA[®]) for proof of concept. ZigBeef planned to field test the prototypes therefore Accura[®] Xtreme was chosen for the prototypes because of its increased durability and thermal resistance over other SLA materials. Once the prototypes were fit checked and the design approved, production began on a working model for consumer purchase.



ID Tag & Handheld Reader

These types of systems are divided between active and passive systems and have been on the market for some time. Active systems are able to capture data from multiple tags but are only able to capture data from a short distance whereas passive systems require the use of a stationary reader that reads the tags while the animal stands in front of or passes next to the reader. The passive tags have no battery source and require the RFI signal from the reader to power it up for transmission.

The ZigBeef reader is an active system but is unique to others in its class because it is omni-directional and can capture data from multiple tags up to 275 feet away. This allows ranchers and herders to identify their herd and capture data whether they are in a pen, a chute or grazing in the pasture. The ZigBeef RFI tag is also unique when compared to other RFI tags because they allow for storage of data on animal allowing for quick and easy retrieval of user defined data and also contains motion sensors which automatically begin transmitting each time the animal moves.



USB Reader and ID Tags

The USB reader can be plugged into any laptop, notebook, PDA or other USB ready workstation and is Windows and Mac compatible. ZigBeef also offers their own interactive software connection for customers using their product.

Hassell plans on developing a system for purchase next year that would allow tags to transmit from one tag to another thereby extending the range of the system and finally transmitting all data back to the reader.

Hassell started ZigBeef LLC in 2005 and has spent 1.5 years developing the USB reader and tag system. Once Hassell realized other companies had the wireless technology and the battery devices to integrate into his design, the idea took off. The concept was originally intended only for the cattle industry but now Hassell realizes the device could be used for other applications like rodeos. Tags could be attached to the bulls and could measure acceleration and severity of the bull ride. %SPN could put it up on the screen,+Hassell said. %to be another fun little statistic.+

APP and ZigBeef continue to work together utilizing rapid prototyping and direct digital manufacturing to bring innovative products to market faster.