

Novel Waterfowl Decoy Design with Natural Motion Technology

Background

The market for wildlife recreationalists is significant with data from the 2011 National Survey of Fishing, Hunting and Wildlife Associated Recreation reporting an astounding \$89.8 billion in total expenditure for hunting and fishing enthusiasts. Of this, hunting accounted for 38% of spend (\$33.7 billion), \$14 billion of which was equipment related.

Traditional waterfowl decoys (e.g. silhouette and shell decoys) exist and there have been recent advances in the development of decoys with motion. However, motion decoys currently on the market are limited in their movement and the motion that is provided is often observed to be unnatural, serving to frighten passing flocks rather than attract them.

As such there is a clear demand and market for decoys with motion technology that mimic the natural movement of waterfowl such as geese and/or ducks.

Technology

A partnership between the Center for Design Device and Development (University of Wisconsin-Fox Valley), a native hunting enthusiast and WiSys has resulted in the design and development of an articulated waterfowl decoy that better captures the natural motion of a game bird. The decoy has been designed to mimic natural movements for a variety of waterfowl and perform in various weather conditions and environments. While current motion decoys on the market are limited to 1-2 motions, WiSys' decoy has the ability to display up to 8 different motion features which mimic behaviors such as feeding, plucking of feathers, strutting, wing flapping, tail wag and sleeping.

Research and Development Status

A fully functional prototype has been developed for a Canadian goose decoy but it is anticipated that the design could be applied to any waterfowl or game bird. The current prototype has a modular design allowing for different options to be installed for ease of use and assembly. The mechanical core can be covered with a variety of different types of waterfowl shells/materials and has been designed to be completely sealed from water.

The above prototype design has been modeled in Solidworks® and utilizes an Arduino programmable device, gaming controller, and servo/DC motors for the movements. Further development and refinement may be required for mass production.

Applications and Key Benefits

- Life sized, decoy with realistic movements that mimic the natural motion of waterfowl;
- Current design provides for 8 different motor-controlled motion features which include:
 - Head moving up and down, left to right; neck arching/bending and rotating; wings extended out/retracting; wings flapping; tail moving left to right and complete body raise to two positions – with neck kept level and with tail kept level. In addition, the mouth can be configured to open anytime the head is lowered using a non-motorized setup.
 - Decoy can be stored with neck rotated 180° and head raised to lie flat on back.
 - Each motion is programmable and can be operated via remote control, which allows for various combinations of pre-programmed movements.
- Potential to be developed to have flock response.

Partnering Opportunity

WiSys is currently seeking a strategic partner interested in expanding their existing product line of waterfowl and/or game bird decoys. By accessing WiSys' patent pending technology and prototype design, companies are provided with an exclusive opportunity to enhance their competitive position in the motion decoy space and compete with existing products on the market by providing their customers with a more realistic waterfowl decoy with natural motion.

Intellectual Property

A U.S. Patent has been allowed for this technology. For more information, please contact Jennifer Cook at jennifer@wisys.org or by phone at 608-316-4131.