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Re-energizing the fence
Designing a Desirable Electric Fence System
Matthew H. McKinley
Abstract

The intent of this Master of Design study is to utilise design-aided research to develop a desirable, conceptual livestock electric fencing system in conjunction with Gallagher animal management Ltd.

Proudly known worldwide for their innovative agricultural products, Gallagher have identified an opportunity for a fence system to be marketed towards the comparatively niche industry of hobby/lifestyle farming, and provide hobby farmers with a fencing system that they can construct without requiring heavy machinery or fencing experience. This could provide a sound opportunity for Gallagher to maintain their industry status and provide a product that is really desirable to the market users.

This investigation intends to develop an electric fence design proposal, primarily for the European hobby farming market, which obtains the sought after market differentiation and innovation by proposing a new livestock fence concept that is desirable to the customer; commencing from the point of purchase, through to its installation and operation. A new product that will give the customer the traditional satisfaction of constructing their fence themselves without machinery and with a system that the user finds intuitive and physically less arduous to install, simple to operate and visually pleasing within a lifestyle farm environment.

The contemporary theory papers regarding Affective design (Warell, 2001) and ‘utilitarian’ and ‘hedonic’ design principles (Chitturi, et al. 2007) support the investigation’s research methods used; determining existing product experiences through market analysis, observation, user interviews and focus
groups, followed by structured concept generation, prototypes and iterated design development.

The unresolved issues and desirable aspects identified throughout the research methods were categorised into ‘performance’ and ‘experience’ criteria attributes which the methods stated that the design required to produce a ‘desirable’ design proposal, and accomplish the research aim.

The final design was evaluated against the research criteria, based on the research knowledge. The testing method indicated that the fence design proposal had fulfilled most of the experience and performance design criteria, successfully achieving the research aim.

The investigation not only fulfilled the aim stated to create a desirable electric fence system, but additionally highlights the advantages of applying ‘affective design’ theories to this particular fencing industry which itself is so wrought by utilitarian tradition.

**Keywords:** Affective design, Desirable, Usability, Product experience, Fence systems.
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