Public Summary – Use of technology for tracking the wellbeing of domestic dogs.

Bachelor thesis, Industrial Design Engineering *(Module 12).*

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It is known that dog domestication has been a standard practise for several centuries now. Earlier, the benefits of dog domestication were for practicality and safety related, however, the reasons differ rather significantly now. Dogs are most commonly domesticated for the therapeutic and overall health benefits they offer to humans (Archer, 1997). Hence, taking care of the dog's wellbeing is said to be the human's moral duty (Hens, 2008). Their popularity can be visibly seen by the fact that there has been a significant increase in the number of dog owners across the developed and developing world (in the last few decades). While it is pleasing to see a harmonious and loving relationship dog owners share with their dogs, it must be noted that dogs are not evolutionarily designed to live in urban neighbourhoods and can be considered pack and hunting animals in their most primitive form. Domestication and selective breeding have brought about strong evolutionary changes that could have otherwise taken several centuries to bring about. This means that there are several aspects that a dog owner must keep in mind with respect to his dog.

However, a large section of dog owners finds it challenging to keep track of wellbeing related aspects due to their own lifestyle. This affects the dog most commonly in the form of dietary and behavioural problems (Bland, 2009). Literature and conducted surveys during the thesis indicate that direct wellbeing of the dog boils down to three main aspects i.e. – diet, exercise, and mental wellbeing.

The aim of the thesis was to explore how tracking practices can be effectively implemented in the experiences of a dog owner and dog such that their wellbeing can be enhanced and maintained. This was to develop a management tool that can help owners to have a holistic oversight of their dog's wellbeing and make the process of data collection significantly easy. This was done by looking at existing products and understanding their functions, to find gaps and add effective tracking features. The result was the Dog health manager.

The Dog health manager is a wearable tracker and smart food dispenser combination that helps take care of the most important aspects of dog wellbeing with the help of tracking technologies. The dispenser and application help track quantity and quality of food and the wearable component measures activity points, along with GPS capabilities, when needed. The application provides several other functions on a dashboard to give a holistic view if the dog's overall health (See figure 1). While this combination of products can be considered unorthodox, it helps focus on the aspects that have the biggest impact on the health of a dog. While most health trackers only assist in tracking exercise related data, the importance of diet is often simply left out (even in fitness trackers designed for humans). This is prevented with the help of the smart dispenser (see figure 2 and 3).

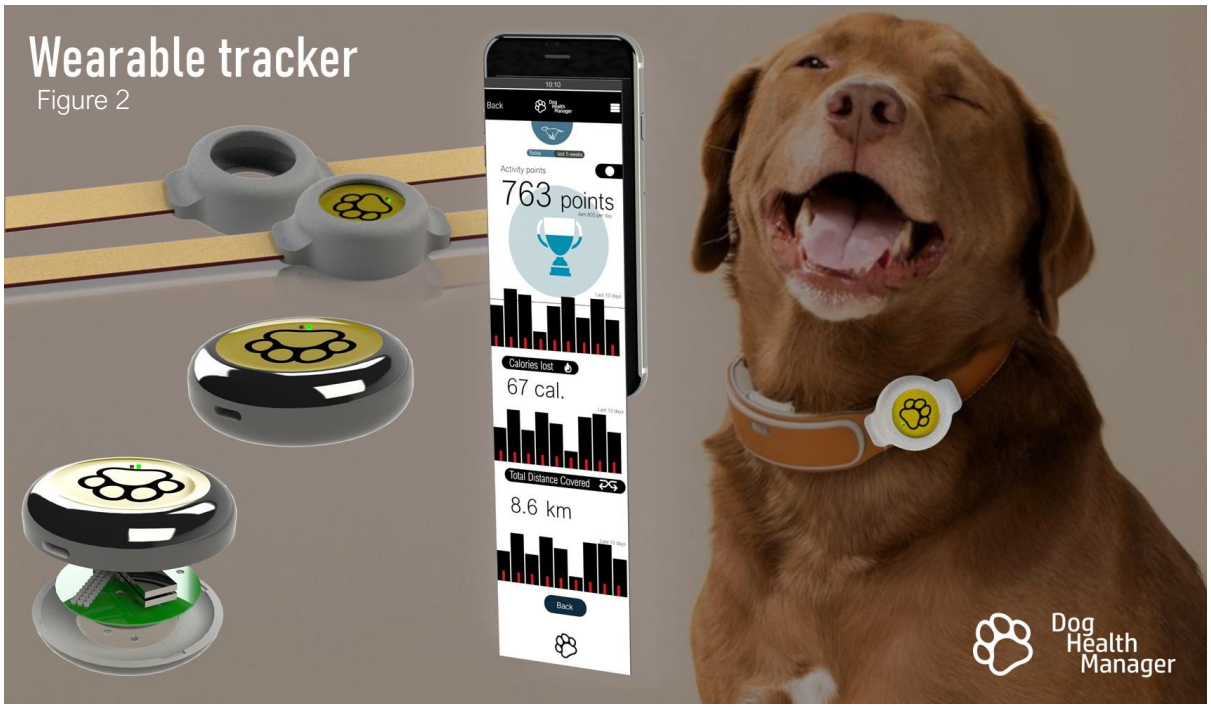

Figure 3

The dispenser helps dispense suggested amounts of food at the set times for when the owner is not home. These meals can be set using the application, which means they can be done remotely. It also accommodates a camera (to see of dog is eating at time of scheduled meal), microphone and speaker (for messages when food is dispensed).

By combining exercise data with that of diet, the application helps provide and plan a complete caloric overview – which can be an essential tool to minimise the chance of common dietary problems such as obesity. The application also recommends frequent fresh meals that help maintain a balance between fresh and packaged meals. For when the owner notices behavioural problems, he can record it intensity and times such that the applications recommend products to combat that problem. For instance, if frequent anxiety is recorded, the application would recommend anxiety reduction vests, beds or other products in the market that claim to do so. In the thesis, a basic marketing plan and packaging design were also made (see figure 4).

Basic packaging design of developed product

Figure 4

In addition to these diet, exercise and mental wellbeing, the application also helps track other important aspects that will add an element of convenience to the user's experience – such as vaccinations. medication tracking etc. Finally, the aim for future development is to also have features that help book vet appointments find pet sitters.

References

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