

myGreenFeat

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1. ECOLOGICAL FOOTPRINT

MyGreenFeat is a tool to measure and track a person's ecological footprint over time based on lifestyle and spending habits in order to help them decrease their impact on the environment.

Resource visualisations (eg see Holmes' 2007 seminal paper) are an important contribution of computing to promoting sustainable lifestyles. Unfortunately, most work in this area falls short of adequately recognising the complexity of sustainability – in oversimplifying the issues and the responses (Mann and Smith 2011). Acting sustainably is not a (relatively) simple matter of changing ones driving habits or reducing home electricity consumption. Frame concludes that this "does not reflect the reality of sustainability in our highly complex, uncertain, value-laden issues facing a resource constrained world" (Frame & Cavanagh, 2009).

Carbon footprinting, or a wider Ecological footprinting (Crompton *et al.* 2002, Ferguson 2002, Gerald *et al.* 2004) is a measure of human demand on ecosystems. It can be applied to products, individuals or aggregate systems. At an individual level the footprint express one's impact in terms of the land area required to sustain your lifestyle. It forms the basis of considerable effort in computing to address sustainability efforts. This is seen in efforts to reduce an individual's footprint through a technical intervention (such as mobile applications to promote healthy transport decisions).

This premise of the current work is that a single snapshot of an ecological footprint does little to address the complexity of sustainability decisions. Even when automatically calculated (such as Könönen *et al.* 2012) an footprint value presented out of context means little to the user. Instead we favour a relationship manager approach. The analogy is a the difference between a snapshot financial balance and a the ongoing personal financial relationship afforded by systems such as Pocketsmith (<http://www.pocketsmith.com/>).

MyGreenFeat is being developed as part of a long-standing and ongoing collaboration between AbacusBio and Otago Polytechnic. Major and successful projects such as Hoofprint and PestWebNZ (PestWebNZ.co.nz) have developed from, and provided a platform for capstone projects. Hoofprint, in association with Alliance Group, measures on-farm carbon footprints.

MyGreenFeat focusses on food shopping as an area of discretion and considerable impact. Users set footprint goals which are then automatically tracked as the system is built to take feeds from either bank records or loyalty cards. The system was deployed to fully functional limited release in September 2011, with ongoing developments continuing towards full scale commercial release.

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The image shows two screenshots from the myGreenFeat application. The top screenshot is the 'Initial Survey' form, which asks for household size, location, section size, transport mode, income, shopping habits, and energy conservation preferences. The bottom screenshot shows a 'Shopping List Breakdown' interface with a list of items (Meat, Fruit, Vegetables, Chocolate/Snacks) and a pie chart showing their relative proportions.

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