



Technology Designed To Facilitate An Active Lifestyle

Physical activity innovations is a company in fort collins, colorado that intends to change an increasingly overweight society.

from the physical activity innovations website:

Obesity has reached epidemic proportions in the United States, as nearly two out of every three Americans are overweight or obese. ... One of the best ways to prevent weight gain and to ensure the long term maintenance of weight loss and good health is to increase physical activity. Someone who is moderately active throughout the day can burn as many calories as a person who sits all day but then has a very vigorous workout. We believe there is an urgent need to develop tools that encourage users to be at least moderately active every day.

i think it is safe to say that the schism between technology and culture is the major struggle of modern man. technology has changed so many aspects of our lives, especially redefining our relationship with time and information. many of us spend a great deal of our professional and personal lives sitting, staring at a screen. our lives become less active. we become less healthy. it is no surprise that the obesity rate mimics the percentage of americans who are sedentary.

conversely, for decades athletes have used technology to better themselves. they have measured, recorded and responded with increased performance. heart rate, caloric output, cadence, it's all there for the enthusiast to use to maximum effect. athletes are motivated by what the technology tells them. digital feedback defines many of them.

physical activity innovations is in final testing of a product called 'my fit companion.' it uses the accurate and real time biofeedback found in athletics and monitors the average human body over the course of the day. it knows which of twelve different activities you've engaged in, for how long, and exactly how many calories you have burned. a sensor worn in a shoe or sock measures orientation, acceleration, pressure and time. the device is wireless and uploads to your smartphone, where it provides data and, more importantly, feedback. with alerts and bar graphs, the device is intended to facilitate a more active lifestyle.

what's interesting about physical activity innovations, is that it is focused on what one of the principals, tom prichett, calls, "the secret sauce," i.e. the interface between the cute little electronic

device's information and your cultural universe. the company aspires to provide motivation, and it is smart enough to know that change is a highly individual and complex task. for them to be successful there must be more than information, there must be social fabric.

tom prichett: "physical activity innovations is after small changes in daily activity that make a big difference in people's lives... if we provide the right set of information back to people, they'll be motivated to make those changes" "people like to get feedback from other people... the trick is to feed this (information) back to your social group."

one can imagine the clubs, organizations and websites that will come about (a facebook calorie app?...).

there won't be corporate dress, there will be healthy dress. look for clothing to respect simple movement; standing while working, walking to lunch, carrying your bags, etc.

social creatures and individuals will be interested in how one stacks up in our respective groups and tribes. and although they advocate simple 'take-the-stairs' type changes, (in this case, more fun because you get to keep score), the results are reportedly profound. it just might work.

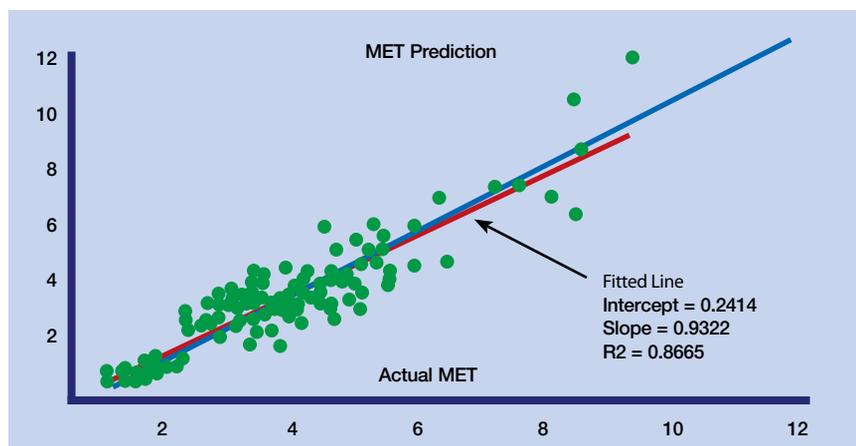
p.a.i. has won awards and recognition for it's yet to be released product. this revolution is about lifestyle, not exercise. the health angle legitimizes the cause, and in the future our culture will accommodate one's need to be active, at will. there

won't be corporate dress, there will be healthy dress. look for clothing to respect simple movement; standing while working, walking to lunch, carrying your bags, etc. keep your eyes open for the 'my fit companion' introduction, in about two years.

i think, like most technology this will assist the motivated, and at the very least, annoy the couch potatoes among us. still, i wonder if this is the first technology that will really 'know' you. it provides a clear graphical interface to your physical reality. it accurately and subtly watches your activity all day, every day. and in a gentle and persistent way, it prods you to better yourself, simply by moving. it knows when you really do take the stairs, and rewards you with virtual bonus points. a touch ironic, a technology that tells you to stop using so much technology.... and go out for a walk. ●

Charting Movement Throughout An Average Day

Branch Model	Sample Size	RMSE, METs	Bias, METs
Sit	32	0.2271	0.0028
Stand	24	0.2291	0.0041
Walk	103	0.7738	0.0346
Cycle	24	0.7778	0.0617
Aggregated	183	0.6575	0.0286
Other known methods		1.2200	0.1000



Device validation: Now that the product knows what the sensor is doing (sitting, standing, etc.) the same sensor data can be used to very accurately estimate energy expenditure. According to the company, this is the highest accuracy reported in research literature to date. The device supplies real-time biofeedback telling users, "You've been sitting too long time to get up and take at least 100 steps."