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augmented shoes :: twistings :: 6 apr 2005

inspired by this last weekend's less-than-ideal encounter with the latest spring fashions, i've been thinking of ways to embellish and revolutionize the often revered but easily overlooked wearable accessory: the shoe.

in relation to how many choices there are in clothing sizes and silhouettes, most shoes are limited in terms of last (the shape of the foot inside the shoe) and volumetric proportion (foot thickness, or ratio of ball to heel width). save for expensive options like specialty shoes or marginal sizes, human feet are often squeezed into ill-fitting options. since there exists such variable sizing standards among companies and also 'give' of certain materials and fabrics, shoe shopping is tedious, imperfect, and usually requires in-person try-out ("if the shoe fits, wear it"). one solution to this might be having a foot scanner that models a person's physical appendage (this already sort of exists for jeans at selfridges from bodymetrics) and then recommends certain sizes and shapes for the wearer; this way someone could even feel comfortable ordering shoes from a catalog or online. another solution might be to insert sensors into the interior of an existing shoe. either the sensors can be used during the shoe-fitting process (if you try on a shoe, sensors will indicate exactly where tightness or looseness occurs, and recommend a better size), or used within existing footwear to collect data over time (like flatfootedness or necessary heel cushioning) in regards to how a person can obtain shoes that are optimally comfortable and durable.

other thoughts on shoes: it might be helpful if shoes could improve the surface on which they stepped. perhaps there could be a sensor on a shoe that would recognize if it were indoors, and slide an indoors sheath or repellent material along the bottom; the outdoors and indoors sole contamination would be minimized. also, perhaps a cleaning sole could be attached or dispensed so that someone could help keep their floors clean by merely walking about their home over time. toss your swiffer! other ideas would be shoes with built-in pedometers and pressure sensors to record and distinguish low-impact and high-impact activities, an RFID bump-toe interface (input through tapping or kicking an object), and customization via multiple styles of conductive lacings through the eyelets.