# FAST TALK

Interviews by Kate Rockwood

**John "Ivo" Stivoric**
> *Cofounder, CTO, and VP of New Products*
**BODYMEDIA**
> PITTSBURGH, PENNSYLVANIA

## > The Networked Body

**Biomedicine and wireless technology are converging to create a booming remote-health-monitoring market—expected to more than double to $7.7 billion a year by 2012—to combat obesity, heart disease, and other illnesses.**

### Making It Personal

*IVO STIVORIC, 38, has developed wearable fitness sensors for clinical patients for more than a decade. Responding to demand, BodyMedia introduced its GoWear fit line for consumers last year.*

"Doctors will tell you to eat better and exercise more, but they're not specialists in behavior modification. If you're on a treadmill, that's the only time you have a dashboard that's telling you concrete numbers. We provide people with dashboards for their bodies. On average, our users wear them for 16 hours a day.

Right now, we're just feeding you the data so you can make your own conclusions. Over time, fitness monitors will be able to feed back more proactive, personalized content. Imagine getting a message that the last time you went a certain numbers of days with little sleep, you got sick. We could even lower your home thermostat after sensing when you've fallen asleep. We're just now scratching the surface of what's possible."

PHOTOGRAPH BY CHRIS CRISMAN

## Designing a Lifestyle App

***GADI AMIT, 46,*** *designed the Fitbit Tracker, an activity monitor that calculates your steps, calories burned, and sleep patterns. The device, conceived by James Park and his partner, Eric Friedman, debuts this July.*

**"The design challenge with the slew of new technologies that allow you to monitor your health is to blend them seamlessly into modern life. Most pedometers are quite male-oriented. They're focused on numeric achievement and look like electronic gear. With the Fitbit, we wanted to move from a message of pure performance to one centered on wellness—more urban lifestyle than fitness. It should disappear into a person's garments, whether that's an evening gown or a running shoe, effortlessly carried 24/7 by either gender. The Fitbit has one discrete button that lets you cycle through the functions, including a digital flower that blossoms as you approach your daily goals. It's a softer, more subtle cue. We wanted to measure the same data but present it in a different way. By being insightful, funny, or invigorating rather than simply stark and scientific, our hope is that you'll wear Fitbit more and it'll be more effective."**

Gadi Amit
> *Principal*
NEWDEALDESIGN
> SAN FRANCISCO, CALIFORNIA

James Park
> *Cofounder*
FITBIT
> SAN FRANCISCO, CALIFORNIA



PHOTOGRAPH BY DREW KELLY

## Empowering the Patients

*DAVID CERINO, 44, and SIDNA TULLEDGE-SCHEITEL, 49, helped create the Mayo Clinic Health Manager. The free Web application, launched in April, supports data from health-monitoring devices, stores family medical records using Microsoft's HealthVault, and offers guidance and reminders from the Mayo Clinic.*

**CERINO:** "Electronic health records are about storing data. But we need to make it come to life so consumers can make smarter decisions."

**TULLEDGE-SCHEITEL:** "Patients see their physicians for only very brief moments throughout the year. People want to be empowered to self-monitor their health to ensure that they're following their doctor's care plan."

**CERINO:** "The HealthVault supports more than 50 home health-care devices—such as blood-pressure monitors, glucometers, and even fitness watches and pedometers—because the goal is to create a complete health-care ecosystem with context."

**TULLEDGE-SCHEITEL:** "One hurdle is that there isn't a clear business model for physicians to put a lot of effort into remote monitoring, so initially, people must advocate for themselves, going to the doctor's office with their charts when they see they're out of control."

**CERINO:** "The adoption will resemble what happened with online banking. In the beginning, you had to input all that data, with biller names, addresses, account numbers, and so forth. Once consumers started to see the value of getting all that information electronically, we got over the hump."

**David Cerino**
*> General Manager, Health Solutions Group*
**MICROSOFT**
> REDMOND, WASHINGTON

**Sidna Tulledge-Scheitel**
*> Medical Director, Global Products and Services*
**MAYO CLINIC**
> ROCHESTER, MINNESOTA



PHOTOGRAPH BY ANDREW CUTRARO

## Gaming the System

***MARIENTINA GOTSIS, 31,*** *teaches "Games for Health" at USC, and with a grant from Health Games Research, she and her partner, Maryalice Jordan-Marsh, designed a social online game called* Wellness Partners, *which awards virtual "energy points" for real-world physical activity.*

**"It doesn't make sense that your Wii Fit data shouldn't be consolidated into the same system that, let's say, your doctor uses for tracking your health. Narrative and stories are what sustain our interest. We want to be inspired and entertained. Right now, there are practically no interesting applications out there that let you use your personal sensor data or health records to have a fun gaming experience. That's going to change. Once you've figured out how to consolidate and share sensor data, you open the door to competition, which brings us to the possibility of entertainment."**



PHOTOGRAPHS BY WILLIAMS + HIRAKAWA (GOTSIS); EMILY SHUR (SAXON)

## Building the Plumbing

***ALISON BURDETT**, 42, developed the Sensium, a tiny chip-based wireless system for medical-device developers that is sold through Texas Instruments. It consumes up to 100 times less energy than other chips for wireless body-monitoring networks.*

**"If you look at pacemakers or even electronic watches, those devices use low levels of power, but they're able to perform only one specific function. The Sensium is an interface that lets developers create body-monitoring devices that are just as small but can do so much more, using orders of magnitude less power than Bluetooth or an Intel microprocessor. For example, Iraq war veterans are learning how to walk with prosthetic limbs using Sensium. They choose which sensors to plug into the platform, such as an accelerometer that measures range of motion. Then they can employ an application which converts that data into a visual representation of their walking posture. Generally, when you want something customizable, you pay the penalty of burning up more power, but here users can customize the system depending on their particular needs, whether it's for clinical use or for sports and fitness."**

**Alison Burdett**
> *Director of Technology*
**TOUMAZ**
> ABINGDON, ENGLAND



PHOTOGRAPH BY JAKE WALTERS

**Marientina Gotsis**
*> Media Lab Manager*
**USC SCHOOL OF CINEMATIC ARTS**

**Leslie Saxon**
*> Professor of Medicine; Chief of Cardiovascular Medicine*
**USC SCHOOL OF MEDICINE**
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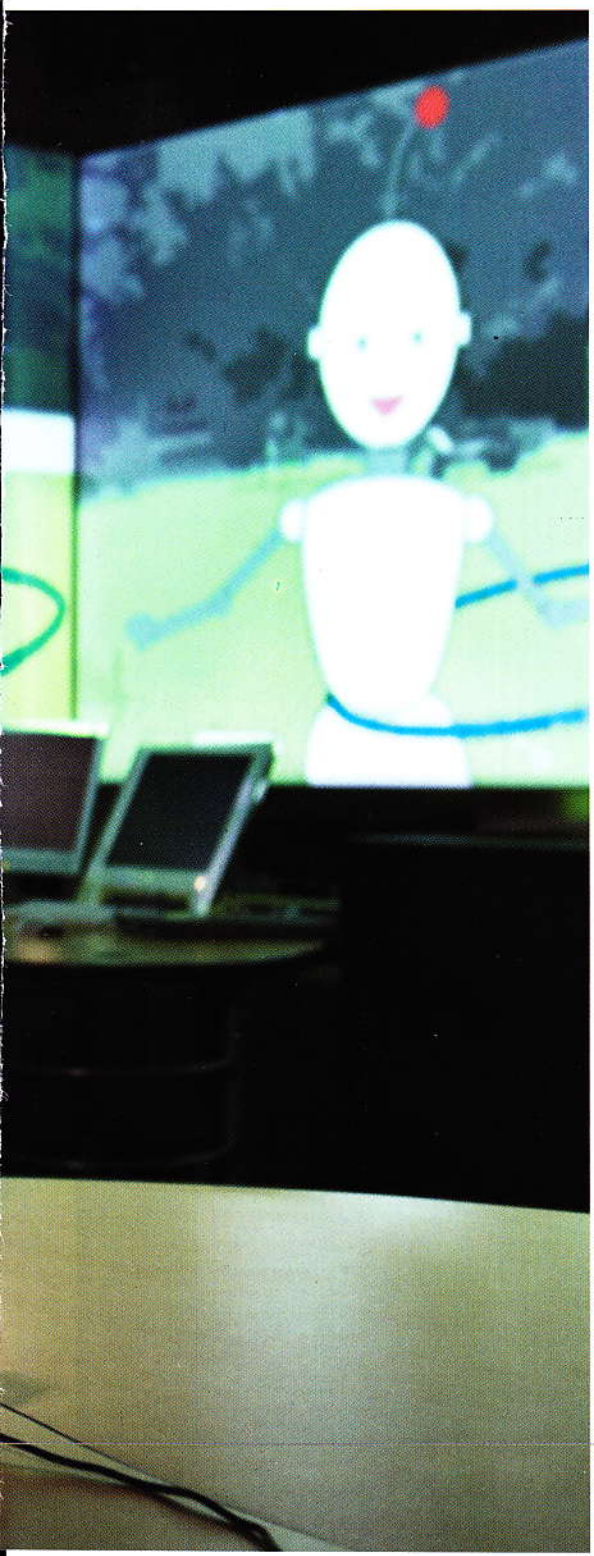

## Reinventing the Consumer

***LESLIE SAXON, 50,*** *has worked in the field of networked health monitoring for 17 years, consulting for companies such as Boston Scientific and Medtronic. She's also the founder of the annual Body Computing conference, which attracts executives from companies including GE Healthcare, Johnson & Johnson, and Nike.*

**"We're bringing people from health-care and technology and telecom companies together to talk about how to integrate the new networked medicine and figure out who's the consumer in health care 2.0. If you manufacture a sophisticated implantable defibrillator that costs $20,000, is your customer the hospital that buys that? The doctor that implants it? Or the patient? Some of these devices don't lend themselves to a traditional clinic model, so it's hard to know how to design a trial to test it and get it covered through Medicare. We've done surveys of our patients with implanted devices; they tell us they'd be willing to pay $30 to $50 a month on their cell-phone bill to be able to have this networked information and interact with it. We have to put the patient at the center, but everyone has to benefit, because the doctor has to view this disruptive care model as important and more efficient or he's not going to adopt it."**