

## KNOWING WHEN TO TEST YOUR MARKET

Peter S. Miller

*Q: I'm planning to start a company. I'm designing a new software product that I hope to license both to software publishers and to some private companies. I'm a methodical person, and I want to make sure that I really understand where I'm going before I go out and talk with people. I have my first prototype product almost completed, and my business plan almost done. My question: When should I consider that my business plan is far enough along so that I can start talking to people and trying to market the product?*

**A:** Your question is a good one. It makes me realize how much has changed in the entrepreneurial field in the last seven or eight years.

It used to be that someone with an idea for a product would whomp up a version of it in his basement and take it around, meetings and all, to publishers. He'd then find a publisher, publish it himself, or give up. Most people pursuing their software visions didn't give much thought to marketing, production, cash flow, staffing, and the like. A few people made a lot of money, and a lot of people went broke after spending more than they could afford.

Many of us now advise would-be entrepreneurs to think about where they want to go with their product ideas, and to put these ideas into written form—a business plan. Investors also like to see a business plan to understand the founder's thinking better.

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These days, I see people who feel as if they can't really get started until the business plan is perfect. We may have come too far toward the rational strategic model, and the business plan is now an end in itself.

You shouldn't let the business plan inhibit other activities. In particular, you need to test the market. You've got to learn as much as you can about who will buy your product, why your product has value to the user, how the decision will be made to buy it, who the competition is, what form the product should take, and how you should get it to market.

If you're staying at home doing development and writing instead of talking with potential buyers, you should think about your motivation. Do you dislike the idea of talking to your customers? Are you scared of selling? If so, you should (a) get over your fear; (b) find a partner early who likes to sell and to whom you'll listen; or (c) work for someone else.

The idea behind a business plan is that it should make you clarify and think through what you want to do. It also makes you gather information you need. The most crucial questions can be answered only by getting out and talking with publishers, end users, distributors, potential employees, and potential investors. Your company will succeed if the world out there can be convinced to buy your product; otherwise, it will fail.

You'll have to listen to the market when it tells you about features, price, channel, point of sale, support, and training.

Being a successful entrepreneur requires both knowledge and action; you need both. You're always selling—to your customers, to your employees, to yourself. If you're not inclined to get out there and meet your customers, you may want to think about whether or not you really want to start your own company.

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This column is dedicated to answering questions from individuals and companies in the computer field. Please send your questions to Peter S. Miller, Minding Your Business, The Boston Computer Society, One Center Plaza, Boston, MA 02108. Questions of wide interest will be answered in print; no questions will be answered by mail. □

*Peter S. Miller helps growing companies, especially in the personal computer field, with problems of business strategy. Copyright 1990 by Peter S. Miller.*

## MY BRILLIANT HOUSE

Simson L. Garfinkel

A few weeks ago, I read a newspaper article describing "Smart House," the house of the future.

Smart House is a house run by computer. It's the kind of house where, if you know you're going to be home late from work, you can telephone it and delay the hour that your house starts cooking your dinner. Half an hour before you arrive, the house turns on the furnace so you'll find a warm and toasty living room waiting for you. When you come up the driveway, the house even turns on the lights.

If a delivery man tries to leave you a package when you're not home, the Smart House telephones you to let you know what happened. If somebody tries to break in, the house telephones the police. Of course, there's little chance that a criminal would even think of breaking into a Smart House, because the house is programmed to turn the lights and the radios on and off to make it look as if somebody is always home.

The article went on to say that Smart House was many years away, and that it would be available only in new construction—it simply would be too expensive to retrofit one of today's dumb houses to become a Smart one.

That got me thinking: While retrofitting an old house may sound very ambitious, most of the features of Smart House are available today with off-the-shelf technology. In fact, for anybody willing to dedicate a computer and a telephone line, an automated house offering a lot more than Smart House is possible *right now*. I decided to turn my house into a brilliant one.

Last fall, I moved into a tiny five-room "carriage house" in Cambridgeport, Mass. Over the next year, I plan to turn this 100-year-old dwelling into a high-tech mecca, complete with a voice-print lock on the front door,

**I plan to turn my 100-year-old house into a high-tech mecca.**

# Deposits

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**COMMENTARY**  
*Continued from previous page*

lights that turn themselves off when you forget, a household electronic mail and message system, all tied together with integrated security and environmental control. I've been given permission to report on my exploits and pitfalls in these pages. Readers with questions or suggestions about home automation are invited to write in; we'll try to print whatever we can.

Even the simplest home automation system requires a computer that can turn the lights on and off. One way to do this is by installing a relay on every light switch and outlet, each relay with a control wire leading back to the computer. A far simpler approach has been available for nearly a decade from X-10 Inc.

The X-10 system (formerly called the BSR System X-10) allows any light or appliance in the house to be turned on or off by remote control, using coded signals that are transmitted through the house's AC wiring. The company sells plug-in modules with plugs on their backs for controlling appliances and lamps, as well as replacement wall switches for controlling room lighting. Most of the X-10 modules cost less than \$15.

Each X-10 module is assigned a house code (A-P) and a unit code (1-16). Although theoretically up to 256 units can be controlled at once, if you and your neighbor both have the system, there's the possibility for interference if you're using the same house codes.

A variety of control units are available to turn the lights on and off. The Maxi Controller is a paperback-book-sized console with pushbuttons for units 1-16 and the commands ON, OFF, BRIGHT, DIM, ALL LIGHTS ON, and ALL OFF. To turn on light #5, press button #5 and then press ON. To dim the light, press DIM. (Every X-10 lamp module contains a built-in dimmer.) ALL OFF turns off every unit in the house.

X-10 makes a timer module that can turn lights on or off at predetermined times. A wireless controller gives you a hand-held light controller, which you can take anywhere in the house. A unit called the Sundowner can turn lights on or off automatically when the sun rises or sets. There's even an alarm system that can flash every light in your house when the alarm goes off.

The first thing I did when I moved into my new home was replace every light switch with solid-state wall modules made by X-10 Inc. I put a master console next to my bed and a few wireless controllers around the house.

Just by itself, X-10 makes even my small house a lot easier to cope with. When I go to sleep at night, I touch the "ALL OFF" button, and I know that every light in the house is off. When I leave the house in the morning, I can turn off the kitchen and dining room lights from the front door. With the wireless controller on the dining room table, I can dim the lights or turn off the lights in the den without bothering to get up.

My electric blanket is on the X-10 system, so my bed is toasty-warm when I want to go to sleep. It turns off at 5:00 a.m. to give me impetus to get out of bed in the morning. The humidifier turns on by itself at 12:00 a.m. and turns off by 3:00—it turns out that three hours of mist are all the humidity that I need, and, as a result, I have to fill the humidifier only every week, instead of every

**The first thing I did was replace every light switch with solid-state wall modules made by X-10.**

night. (The blanket and humidifier, as well as my front door light, are on a different house code from the rest of the system, so they don't shut off when I touch ALL OFF.)

I bought most of my X-10 wall modules from Radio Shack, where they're sold under the name Plug 'n Power. The modules are also available directly from X-10 (located in Northvale, NJ; 201-784-9700), and from Levitron, Sears, and Heath/Zenith. X-10 equipment is also available at Egghead software. No matter what the brand name on the module, they all come from X-10, and they are all compatible.

What makes the X-10 system perfect for my purposes is the RS-232 Home Automation Interface, which lets my home computer control the X-10 system directly.

The Home Automation Interface plugs into the serial port on an IBM PC, Apple Macintosh, Commodore C64, or Radio Shack Color Computer. It contains a built-in clock, as well as enough memory to hold 128 on/off events. Software provided by X-10 lets you program a complicated sequence of ON, OFF, and DIM commands into the controller; then you can disconnect it from your computer and leave the module's internal electronics doing the job.

In addition to turning lights on or off at a preset time every day, the interface has a "SECURITY" mode, which turns a light on or off within an hour of a set time (so nobody watching your house will think the lights are being run by a timer). On/off events can also be programmed to happen only on weekdays, weekends, or just once.

X-10 provides a programming guide to the interface. If you leave the X-10 system connected to your computer, the computer can turn lights on or off at its whim, as well as be alerted to every on/off command initiated by the other command modules. I'll use these features over the next few months, as well as other off-the-shelf systems, to continue building my brilliant house. ☐

*Simson L. Garfinkel is a freelance journalist living in Cambridge, Mass. Copyright 1990 by Simson L. Garfinkel.*