The television is channeling you.

Data-gathering firms and technology companies are aggressively matching people’s TV-viewing behavior with other personal data—in some cases, prescription-drug records obtained from insurers—and using it to help advertisers buy ads targeted to shows watched by certain kinds of people.

At the same time, cable and satellite companies are testing and deploying new systems designed to show households highly targeted ads.

The goal: emulate the sophisticated tracking widely used on people’s personal computers with new technology that reaches the living room.

One of the most advanced companies, Cablevision Systems Corp., has rolled out a system that can show entirely different commercials, in real time, to different households tuned to the same program. It can deliver targeted ads to all the company’s three million subscribers concentrated in New York, Connecticut and New Jersey.

In an early test of Cablevision’s technology, the U.S. Army used it to target four different recruitment ads to different categories of viewers.

One group, dubbed “family influencers” by Cablevision, saw an ad featuring a daughter discussing with her parents her decision to enlist. Another group, “youth ethnic I,” saw an ad featuring African-American men testing and repairing machinery. A third, “youth ethnic II,” saw soldiers of various ethnicities doing team activities. An Army spokesman declined to comment.

This new wave in monitoring Americans is driven, in part, by fear: The TV industry is moving quickly lest it lose ground to Internet advertising companies, which have found they can charge a premium for online ads that target individual people based on their specific interests.

In a rallying cry last month at a TV ad-targeting conference hosted by Broadcasting & Cable, one keynote speaker cited the space race of a half-century ago: “This is our Sputnik moment,” said
or share viewership information.

How to Opt Out of Having TV Data Put to Use for Advertising Purposes

Many—but not all—companies let people opt out of having their anonymous TV-viewership information used for ad purposes. DirecTV subscribers can opt out by contacting the company at (800) 531-5000; www.directv.com/email, or DirecTV Privacy Policy, P.O. Box 6550, Greenwood Village, CO, 80115-6550.

Tivo Inc. says users can opt out by contacting customer support. Details at support.tivo.com/app/answers/detail/a_id/1279.

A Charter Communications official says customers can opt out of collection of audience-measurement data. The firm says it removes personal details, including names, before sending data to outside companies.

Cablevision Systems Corp., which can show different ads to different households, lets users opt out of seeing targeted ads by calling (888) 425-2591 or by going to www.optimum.net/Privacy/PREFERENCES and selecting an option to not receive Addressable Third Party Advertising. Cablevision says it doesn’t license viewership information.

Comcast Corp. is gearing up for a test of ad-targeting this year. A spokesman said the firm has yet to determine whether there will be an opt-out option, but that “privacy and notification will be key considerations.”

--Jessica E. Vascellaro

More From Digits

Digits: Calculating the Benefit of a Targeted TV Ad

For years, the TV industry has been gushing about the potential to deliver more targeted ads. There have been false starts. In 2008, cable companies formed a consortium to deploy targeted ads nationally, among other things. Initial efforts were thwarted by issues such as outdated infrastructure.

So, individual companies are proceeding on their own. Bank of America estimates the market for “addressable ads”—those targeted to specific household segments—could reach $11.6 billion by 2015.

Ms. Scheppach of Publicis, addressing the February TV-advertising conference, had sober words: Adapt quickly, or go the way of other media whose business has been eaten by the Internet, like newspapers. “We have to shape our future before it shapes us,” she said, predicting that, within six years, technology could be in place to allow all TV ads to be targeted.

Some industry executives urge caution, saying they are reluctant to make the investment when the benefits are unknown. Others warn advertisers should proceed cautiously in light of the intensifying regulatory scrutiny of Internet tracking.

“"This could be marketing nirvana, or fraught with potential peril," says Tim Hanlon, chief executive of Velociter, the investment arm of Mediabrands, a unit of Interpublic Group. For the first time, TV tracking could combine viewership data, telemarketing data and online data to examine people’s lifestyles. People might see a greater volume of ads they find "personally intrusive," he says, citing political campaigns as examples.

Companies involved in TV targeting say the household-level matching is done by outside companies that provide only aggregated data, stripped of personally identifiable details such as...
TiVo categorizes some of its customers into "attitudinal" segments—including Republicans, Democrats or fans of a particular celebrity chef—by surveying 35,000 users about their habits and combining the data with the shows they watch. It sells the data to marketers via a service called PowerWatch.

TiVo users must opt in to be included, the company says. It solicits participants with offers such as the chance to win a $1,000 Amazon shopping spree.

TiVo says it also licenses anonymous viewing data to TV-targeting upstarts like New York-based TRA, which matches second-by-second data from 1.7 million TiVo set-top boxes and a cable operator with other data types—including 57 million frequent-shopper cards. The matching is done through Experian PLC, a major data company that knows which set-top box and which frequent-shopper card belong to a particular street address. (Experian doesn't share addresses with TRA, or gain access to viewing or frequent-shopping data.)

The method can turn up surprising associations: TRA found that watchers of "Jersey Shore" are regular buyers of yogurt.

"It really helps you drill down," says David Shiffman of ad agency MediaVest.

Rentrak, a TV-measurement and advertising-services firm, can in some cases associate households' video-on-demand viewing with their live-TV viewing and DVR-television viewing. The company, in some cases, measures videos watched on mobile devices, too.

That kind of data could make it possible for advertisers to target their campaigns at different consumer groups, via different video media, at the time the desired viewers are most likely to watch, says CEO Bill Livek. He says the process is an "evolution" of the direct-marketing business.

Operating out of an old Brooks Brothers factory in downtown Manhattan, Simulmedia is drawing upon the online model for targeting ads. Its raw material is more than 75 terabytes of data from TiVo, DirecTV, Charter Communications and others.

The companies give Simulmedia the times when channels are changed on set-top boxes, along with a unique ID for each box. This lets the company associate one day's viewing with the next. Mr. Morgan says Simulmedia can't tie the data back to individuals.

After determining what programs and ads the set-tops have been tuned to, Simulmedia bundles the boxes into more than two dozen groups based on viewing patterns—"wild n' crazies" (young male-themed shows), "hecklers" (stand-up comedy) and "animated grownups" (cartoon sitcoms), among others.

Advertisers and stations have run more than 50 campaigns using the data, Mr. Morgan says. He declined to name participants.

Given a year of viewing data, Simulmedia can almost perfectly predict around 70% of what types of shows a given set-top box is likely to be tuned to, and when, Mr. Morgan says. He likens the process to helping advertisers "choke the shotgun blast and bring it in close," rather than scattering their ad messages widely.

Not all companies that send data to Simulmedia and others let people opt out.

Mr. Morgan has aspired to bring Web-like targeting to TV for years. He took his first crack more than a decade ago in the U.K. and Switzerland. The effort fizzled, he says, amid struggles to adapt online techniques to cable-TV technologies.

"Most of the work that has been in online advertising over the past 20 years has really been preparation for the big screen," he says, referring to TV. "That's where the money is."

The plumbing is being put in place. Satellite-TV company DirecTV says it will be able to deliver different ads during the same programming to 10 million homes in the fourth quarter of this year. Comcast Corp., the country's largest cable system by subscribers, has run two targeted-ad trials in recent years and is planning a third for later this year.

Cablevision is the furthest ahead, having completed its rollout of targeted ads across all its set-top boxes late last year. Its system is powered by Visible World Inc., which makes technology that can switch different commercials in and out of different set-top boxes based on criteria that advertisers can specify. The company is also powering the new Comcast test.
Today, the scope of the Cablevision effort is on display in a monitoring room at Visible World in New York. There, large TVs along one wall play the ads being inserted into Cablevision programming, in real time. Other monitors show grids indicating how many households in a geographic zone are seeing a particular ad; the numbers flicker from the single digits to a few thousand.

Visible World's founder, Seth Haberman, says his company doesn't know the names or personally identifying information about the people sitting in front of a given set-top box. "We don't want to look in the window," he says. "It is a little spooky."