Contents ▶ A Twitter knockoff has China speaking freely 39 ▶ Will "TiVos for reading" save Old Media? 40 ▶ After years of delays, India finally gets its 3G 42 ▶ Innovator: Adam Beguelin "socializes" Web-connected cameras 43 ● Edited by Jim Aley

Technology

Mobile Wars!

▶ After Nokia's software surrender, the five-way struggle for mobile dominance heats up

▶ "The game has changed from a battle of devices to a war of ecosystems"

It's been a big couple of weeks in mobile. **Verizon Wireless** finally got the iPhone. **Hewlett-Packard** unveiled the first fruits of its Palm purchase last year. **Nokia,** the world's biggest handset maker, abandoned its once-dominant Symbian mobile software system and demoted itself to a kind of glorified contract manufacturer of **Microsoft**-powered devices.

The struggle for mobile dominance has entered a new phase. Why would Nokia throw out Symbian, with its 37 percent market share, in favor of software with less than one-seventh of that? Because recently hired Chief Executive Officer Stephen Elop is convinced that Microsoft has better odds of going up against the four other mobile powers-**Apple, Google, Research In Motion,** and HP-and making its new Windows Phone 7 software a center of gravity for the world's programmers, manufacturers, and consumers. "The game has changed from a battle of devices to a war of ecosystems," Elop told investors at a London press conference on Feb. 11.

Actually, it's the same game that created the most valuable franchises in tech history, from **IBM** to Microsoft to **Facebook.** All successfully established themselves as "platforms," in which countless entrepreneurs and programmers developed technologies that gave value to customers and profitability to shareholders-sucking oxygen away from rivals all the while. In the 1960s, IBM trounced Sperry and other mainframe makers by creating a soup-to-nuts stack of hardware, software, and services. In PCs, Microsoft erased Apple's early lead by signing up hardware makers to create cheap machines, and software companies to develop Windows versions of everything from word processors to Tetris.

What's different this time is scale. "Mobile is the biggest platform war ever," says analyst Whyman

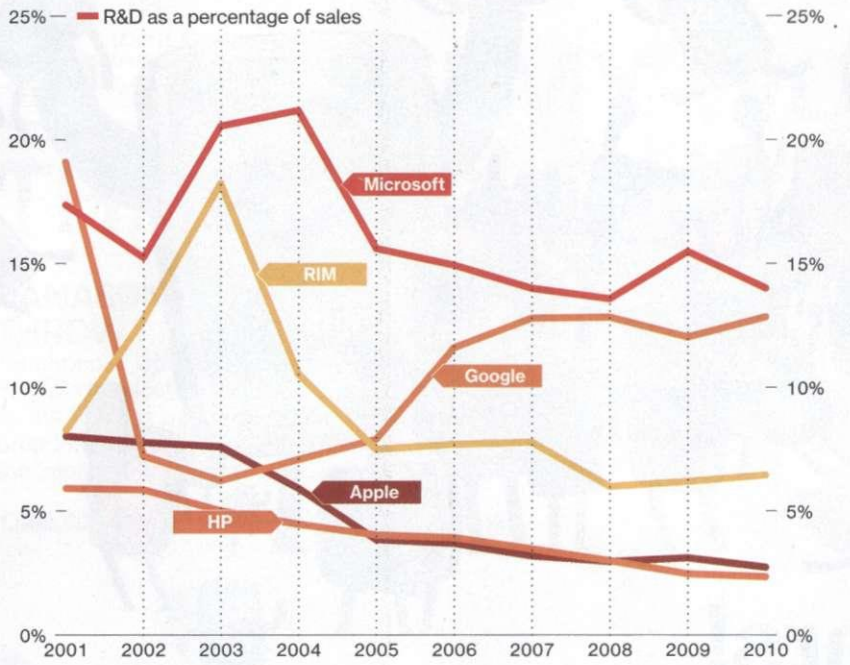
Facebook vanquished social networks such as **Myspace** by repositioning itself as a platform-a decision that led to the creation of gamemaker **Zynga** and other app companies that keep Facebook's 500 million users hanging around.

What's different this time is scale. "Mobile is the biggest platform war ever," says Bill Whyman, an analyst with International Strategy & Investment. More smartphones were sold than PCs in the fourth quarter, and sales should reach $120 billion this year. That doesn't count billions more in mobile services, ads, and e-commerce.

This war will probably last for some time, too. Unlike with PCs, where the unquestioned victor-Microsoft-quickly emerged and enjoyed years of near monopoly, no one has a divine right to dominance in mobile. Microsoft crushed its competition by forcing consumers to make a choice. There were far more software applications for PCs, and most didn't work on Macs. The more Microsoft-powered machines out

Bang for the R&D Buck

One result of Apple's strong platform: It doesn't have to spend big to create hits. Only HP, which bought rather than built its way into mobile, spends less on R&D as a percentage of sales



DATA: BLOOMBERG

there, the more people wrote software for them, the more people bought them, and the bigger the whole ecosystem became. Economists have a name for that phenomenon: "network effects."

All cell phones can talk to each other and handle the same websites and e-mail systems, so winning means making products that function more effectively and appealingly. That sums up Apple's success. Steve Jobs figured out long ago that when people spend their own money, they'll pay for something a lot nicer than the unsexy gear the cheapskates in corporate procurement choose. While others competed on price, Apple focused on making its products reliable and easy to use. Once customers buy an iPhone and start investing in iTunes songs and apps, they tend to stick with the ecosystem and keep buying-even though there's no proprietary lock on the proverbial door. Apple's huge sales volume makes carriers and suppliers more likely to agree to its terms. The software that powers everything Apple makes-all variations of the Mac operating system OS X-is as intuitive to developers as Angry Birds is to app shoppers.

The result is economic leverage of staggering power. To create a blockbuster, Apple doesn't need to spend billions on a start-from-scratch moonshot of a development project. It just needs to tweak a previous hit. Take the iPad, which is in many ways a large iPod touch. Apple won't say how much the iPad cost to develop. Consider these numbers, though: In the year ended Sept. 30, during which Apple introduced the iPad and the iPhone 4, the company spent $1.8 billion on research and development. Over the same period, Apple's revenue increased by $22.3 billion. Nokia spent three times as much as Apple on R&D-$5.86 billion-and increased revenue by just $1.5 billion. No wonder that Apple, whose share of total global mobile-phone sales is only 4.2 percent, gets more than half the industry's profits, according to research firm Asymco.

Even Google, Apple's mightiest rival, got only a $5 billion increase in sales on its $3.4 billion R&D budget. It does have

plenty to show for its efforts, though: Its Android ecosystem is growing at a blistering pace. In the fourth quarter, according to research firm Canalys, twice as many Android devices shipped as iPhones. "Google is being far more aggressive in building its platform than Microsoft ever was," says Bill Gurley, a partner at Benchmark Capital.

Barring big surprises, the other contenders-RIM, HP, and Microsoft-are in for a slog: too dependent on mobile devices to give up, yet lacking the tools to make much progress. All lost share in 2010 and have orders of magnitude fewer apps available for their devices. RIM still has legions of loyal BlackBerry fans, though developers routinely complain it's more difficult to create apps that run on those devices; that would help explain why RIM may be working on a technology so its devices can also run Android apps, as Bloomberg News recently reported. HP has the opposite problem: sweet technology and little foundation to build on. The company wowed the standing-room-only crowd that came to its Feb. 9 smartphone and tablet unveiling; attendees oohed when former Palm CEO Jon Rubinstein showed how to move a song or contact between phone and tablet just by tapping on the glass. Still, HP has spent years being a member of ecosystems-in particular, Microsoft's-rather than building its own.

Then there's Microsoft, a company that knows from platform wars. Millions of Nokia handsets will someday come with Windows Phone 7, the first model perhaps by the end of this year. Windows Phone 7 wins nods of approval from techies around Silicon Valley. Yet in a poll of developers by brokerage Sanford C. Bernstein, not one named it as their first or even second priority. Nor are the carriers quivering with excitement. "I do want a third strong OS out there," **Verizon Communications** Chief Technology Officer Anthony Melone recently told CNET. "But I still have doubts whether Microsoft will get the traction they are hoping for with Windows Phone 7."

The best hope for the mobile also-rans is that Apple and Google get greedy. On Feb. 15, Apple announced a subscription service that could force companies with hit apps, such as **Rhapsody**'s music-streaming service, to share some of their revenue with Apple. The same day, **Vodafone** CEO Vittorio Colao com-

COLORBLIND IMAGES/GETTY IMAGES

Don't be lulled by the stock market's calm page 45 ▶

plained that Apple and Google needed to absorb some of the massive bandwidth costs required to handle all those iTunes downloads and YouTube clips.

Even with a little overreaching, though, Apple and Google will be hard to beat. And it's not just they, says International Strategy & Investment's Whyman. "It's the whole ecosystem. You're competing with all the companies who have a vested interest in those platforms." —*Peter Burrows*

The bottom line *Apple and Google dominate mobile. The other big players—HP, Microsoft, and RIM—will have a hard time catching up.*

Social Media

A Twitter Knockoff Has China Talking

▶ Weibo dominates the micro-blogging market

▶ It is "by far the best platform for free speech" in the country

Ye Fangzhao, a 31-year-old freelance brochure editor for auto companies, abandoned Twitter a year ago to start using Sina Weibo, China's homegrown equivalent. Now he's on the micro-blogging service 10 hours a day, using it to connect with motoring experts and keep up on trends. "I don't need to go to bookstores or buy magazines," says Ye, 31, who lives in Xiamen, on China's east coast. "It saves me time and money."

Sina Weibo has become China's leading site for micro-blogging, the **Twitter**-inspired phenomenon focused on extremely short messages. The site is responsible for 87 percent of the time spent on micro-blogging services in China, says Eric Wen, an analyst at Mirae Asset Securities in Hong Kong.

In the lead-up to the 20th anniversary of the Tiananmen Square protests in June 2009, the Chinese government blocked Twitter. Shortly after, during ethnic riots in Xinjiang, **Facebook** went dark, too. The ensuing social media vacuum left an opening for Sina Weibo, which appeared in August of that year. Rivals such as **Tencent**, **Sohu**, and **NetEase** didn't begin rolling out their own micro-blogging services until early 2010. That gave Sina Weibo a head start, and it is now a top information source for many Chinese-and often an outlet for the controversial topics avoided by state-controlled media.

Weibo is a division of **Sina Corp.**, which operates China's third-most-visited Internet portal. Sina's shares, traded in the U.S. on the Nasdaq exchange, have almost tripled in price since Weibo's launch, and the company has a $5.7 billion market capitalization. Although Weibo does not yet make money, it is at the forefront of Sina Chief Executive Officer Charles Chao's effort to turn the company's sites into the premier destination for China's 450 million Internet users. He hopes Weibo's popularity will help Sina evolve from a YahooMike portal that creates content internally to a Facebook-like site that attracts outside developers. "Our strategy is to build a platform that is open to everybody," he says.

Weibo mimics the format of Silicon Valley's micro-blogging pioneer. "We learned much from Twitter," says Chao. Weibo limits posts to 140 characters-though in Chinese, in which many words are just two or three characters, a lot more can be expressed under that constraint than in English. Weibo users follow and comment on updates from other members and can post photos and videos.

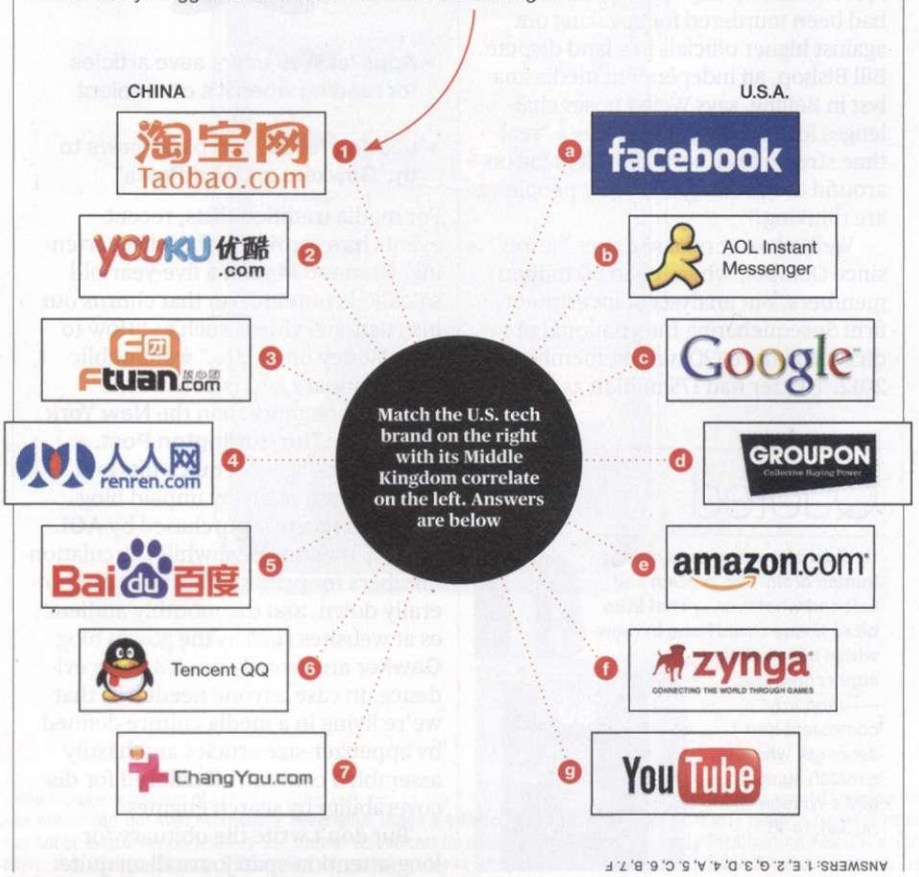
87%

Weibo's share of total time spent on Twitter-like services in China

Celebrities are a big part of Weibo's appeal. The most popular accounts belong to entertainers such as actress Yao Chen, who has 5 million-plus followers. Just as "tweet" has become a verb in English, *"zhi weibo"*-literally "to knit a scarf"-has entered the lexicon in China. (*"Weibo"* means "micro-blog" but sounds like Mandarin for scarf.)

Like other Internet services in

How do you say "Facebook" in Mandarin?
If imitation is the sincerest form of flattery, Chinese tech firms are downright adulatory. Most of Silicon Valley's biggest brands have their own Eastern cognate.



ANSWERS: 1.E, 2.G, 3.D, 4.A, 5.C, 6.B, 7.F

China, Weibo deletes or limits sensitive posts as required by the government. Nicholas Rristof, the *New York Times* columnist who often writes about human-rights issues in China and elsewhere, opened an account late last year. Kristof, who can write in Chinese, says censors deleted his account after five posts, one of which mentioned the 1989 Tiananmen Square crackdown. During the recent anti-Mubarak protests in Cairo, a search for "Egypt" returned only an explanation that legal restrictions prevented Weibo from displaying the results.

Despite censorship, Weibo is "by far the best platform for free speech" in China, says Lee Kai-fu, **Google**'s former China head and one of Sina Weibo's most popular users. Although the search term for Egypt was restricted, many Weibo posts mentioned the protests, and at least one account offered a live webcast from Tahrir Square.

Weibo users generally have the freedom to speculate about stories censored by the mainstream media. In December a village leader in the eastern coastal town of Yueqing was hit by a truck and killed. Users openly speculated that he had been murdered for speaking out against higher officials in a land dispute. Bill Bishop, an independent media analyst in Beijing, says Weibo poses challenges for censors yet provides a "real-time stream to all sorts of stuff going on around the country, and what people are thinking."

Weibo hasn't released user figures since October, when it had 50 million members, but analysts at investment firm Susequehanna International predict it will have 120 million members by 2012. Twitter had 175 million as of September. Says Ma Yuan, an analyst with investment bank Bocom International Holdings in Beijing: Weibo "is becoming the next killer application on the Internet and mobile phones."
—*WenxinFan*

Quoted

"It did make me appreciate the human brain. The protein and salt and whatever. ... That little bit of tissue could hang in there with a billion-dollar supercomputer."
—*Jeopardy!* contestant Ken Jennings, who lost a match against IBM's Watson on Jan. 14-16

The bottom line *Sina's CEO says micro-blogging service Weibo is key to the company's goal of becoming a dominant Internet platform.*

New Media

Will 'TiVos for Reading' Save Old Media?

▸ Apps let Web users save articles for reading when it's convenient

▸ Leaving "clicks and page views to the Gawkers and HuffPosts"

For media traditionalists, recent events have proved rather disheartening. **Demand Media,** a five-year-old so-called content farm that churns out instructional videos such as "How to Save Money on a Date," went public in late January and is now worth $240 million more than the **New York Times Co. The Huffington Post,** a six-year-old digest of quick hits and strong views, many by unpaid bloggers, was recently purchased by **AOL** for $315 million. Meanwhile, circulation numbers for print publications are generally down, and the monthly audiences at websites such as the gossip blog **Gawker** are broadly up. It's more evidence, in case anyone needed it, that we're living in a media culture defined by appetizer-size articles and hastily assembled content, all tailored for discoverability by search engines.

But don't write the obituary for long-attention-span journalism quite yet. Go to instapaper.com and download the plug-in for your Web browser. Then install the accompanying **Instapaper** application to your iPhone, iPad, Kindle, or (soon) Android device. The next time the boss steps away and your midafternoon Web excavation unearths a well researched, brilliantly written article-such as the feature stories in this magazine, if we may be so bold-click "read later" in the browser toolbar. The service acts like a TiVo for words. It will save the story to your e-reader or your tablet so it can be read later on the train, the couch, or wherever you settle in to really read. "We let you save stories for a time when you can actually attentively read them," says Marco Arment, the creator and sole employee of Instapaper. "You can leave the world of clicks and page views to the Gawkers and HuffPosts." He charges $5 for a premium version of the app that lets users store up to 250 articles and share them with other users.

Instapaper, which has more than a million.users and is growing rapidly, has competition. The biggest is **Read It Later,** with more than 3 million users. **Longreads,** a site that shares recommendations for in-depth articles, has a lively **Twitter** feed with more than 15,000 followers. Magazines such as *Wired, The Atlantic,* and *The New Yorker* have started to specify their stories as Longreads when they promote them on Twitter. "We are trying to help filter out the noise and junk content on the Web," says Mark Armstrong, who started Longreads a little over a year ago.

Nate Weiner, the 26-year-old Web designer in San Francisco who created Read It Later, thinks these services hold promise for old-school journalism. Young people who may have canceled a subscription to a magazine or newspaper-or never had one to begin with-tend to stumble onto serious writing while they're online at work. That's precisely when they're least likely to plow through a longer story. Weiner recently sifted Read It Later's usage data and found that most of his users read saved stories between 6 p.m. and 9 p.m. If they're on mobile devices, reading time spikes during the commuting hours and again from 8 p.m. to 10 p.m. "When I saw this

CORBIS CUSP/ALAMY (NEWSPAPER); SETH WENIG/AP PHOTO

data, it made me hopeful," says Weiner. "The iPad and iPhone and other mobile devices are allowing us to move media to a time when we can actually consume it."

There may be one snag for traditional publishers. Services such as Instapaper and Read It Later let users view their saved stories in an uncluttered format stripped of the ads and other marginalia of the Web browser. That could cost media companies some advertising revenue. "The general sense I get from publishers is that they are more interested in getting people to read their articles and see their brand than getting the tiny bit of revenue they might be losing here," says Mike Vorhaus, president of media consulting firm Magid Advisors. It's possible that tools such as Instapaper and Read It Later simply aren't popular enough yet to pose a threat to publishers. Or maybe the folks at those old-time media companies finally see a place for long-form content in a short-form world. *—Brad Stone*

The bottom tine *Instapaper and other apps that save articles for later consumption are a hit with online readers—and with old-school publishers.*

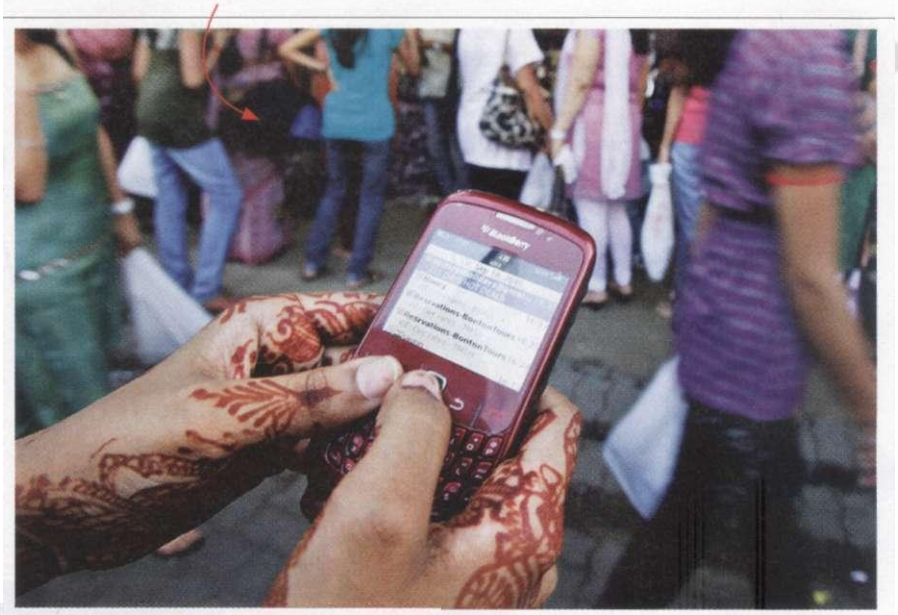
100

MILLION DOLLARS

Amount Internet radio site Pandora hopes to raise in an IPO announced on Feb. 11. The company lost $328,000 on revenue of $90.1 million in the first nine months of 2010.

DATA: PANDORA MEDIA

Mumbai: New 3G service will give millions high-speed access to the Net



Mobile

After Years of Delays, India Finally Gets 3G

▸ Service starts just as the rest of Asia rolls out 4G wireless service

▸ "People have been starved for high-speed Internet connections"

In 2007, Varun Nand Chahal, a young entrepreneur in Bangalore, bought a 3G-ready mobile phone. It was his first handset capable of high-speed Internet access, and he was looking forward to using it to surf the Web. The only problem was that India didn't have 3G. The launch of the service in the country was repeatedly delayed. Just recently, Chahal, 25, got his wish. After three and a half years of waiting-and just in time for the rest of Asia to move on to 4G-Indian wireless carriers are rolling out 3G. **Tata Teleservices** began offering 3G in November, and **Bharti Airtel,** India's largest operator, launched service in the southern states of Karnataka and Tamil Nadu in January. **Vodafone Essar** and other carriers plan to introduce 3G, too. How's the quality? "Sometimes I get a signal," says Chahal, a Bharti Airtel customer. "Sometimes I don't."

Japan and South Korea got 3G early last decade, and China has had it since 2009. In India, bureaucracy stalled the process. The government didn't auction off licenses for the segments of electromagnetic spectrum that 3G uses until last year. Then, companies that spent a combined $14.9 billion in those auctions had difficulty building up their networks: Regulators banned operators from buying equipment from low-cost Chinese suppliers such as **Huawei** and **ZTE** for nine months until the vendors agreed to satisfy security concerns by providing access to their source code.

Another hurdle: The country is divided by telecom authorities into several dozen areas, with five or six operators getting permission to work in each-and none getting the go-ahead to operate nationwide. Since no one company has a nationwide 3G network, wireless carriers need to form alliances with rivals and provide roaming services domestically.

For all the hiccups, though, the new 3G networks offer the potential to transform India. Less than 1 percent of the population has access to broadband connections, says Aditya Kaul, an analyst with ABI Research in London, because the quality of fixed-line networks is so poor. "You don't have the infrastructure, so you have to look at other means of providing broadband," he says. While the networks that operators are launching won't be powerful enough to stream movies or provide other data-intensive services, they will still open the Internet to many Indians who "are just looking for basic broadband connectivity," adds Kaul. "Wireless is a good, cost-effective way to do that. That's why people are so excited." Mobile operators are already introduc-

FROM LEFT: KUNI TAKAHASHI/THE NEW YORK TIMES/REDUX; PHOTOGRAPH BY TIMOTHY ARCHIBALD FOR BLOOMBERG BUSINESSWEEK

ing services unheard of in pre-3G India. Vodafone Essar announced an alliance with **ICICI Bank** on Jan. 12 to provide mobile banking services. The same day, Bharti Airtel unveiled a similar partnership with the State Bank of India. India is on the cusp of a "new wave of Internet access," Bharti Airtel Chief Executive Officer Sanjay Kapoor told analysts on Feb. 2.

India's telecom companies need the boost. A dramatic price war has cut into their revenues for voice and text-messaging services over 2G networks. Bharti's average revenue per user, a benchmark figure for analysts, is just 198 rupees ($4.38) a month, down from 230 rupees a year ago. Executives at Indian operators say they learned their lesson from 2G and won't let the same price war happen again. The 3G battles will be fought not on price "but on content and quality," Syed Safawi, president of No. 2 carrier **Reliance Communications,** told reporters in December. Skeptics such as ABI's Kaul aren't convinced Indian operators can resist the temptation to undercut rivals. "To compete in the market, the best strategy is to go with the lower price," he says.

Even if a price war does break out, cheaper access will make it easier for more Indians to use mobile networks as their primary way onto the Internet. "People have been starved for high-speed Internet connections," says G.V. Giri, an analyst in Mumbai with IIFL Securities, who predicts the number of people with broadband access will grow from 10 million now to 100 million by 2014. Those customers may eventually get to enjoy the same Internet speeds as some of their earlier-adopting Asian neighbors: Several Indian carriers are talking about launching 4G networks, perhaps as early as next year.

Indian subscribers may not have much experience with high-speed access, but that won't be a problem as long as they have phones that can get them online. "You just need to get the things in their hands," Giri says. "The rest, they'll take care of."
—Bruce Einhorn with Ketaki Gokhale

The bottom line *Indian wireless carriers, ravaged by years of price wars, are rolling out 3G. This time, they say, they'll compete on content and quality.*

Innovator

Adam Beguelin

The entrepreneur has built a free service that makes it easy to share and store video feeds and turns cheap webcams into motion detectors

In 2006, Adam Beguelin sold his start-up, a video-search site called Truveo, to AOL for $50 million. Then he decided to pack up his family and move to Vietnam for a year of kite-surfing and cultural exploration. He didn't want to wait around for his place in California to sell, so before he left he rigged two webcams to monitor the open houses.

The difficulties of getting that setup to work gave Beguelin, 47, the idea for his next venture. He's now back in the U.S. and working on Sensr.net, a site that makes it easy to view, share, and store video feeds from network cameras, which connect to the Internet without need for a PC. (Some webcams, including those packaged with new laptops, require additional software.) Sensr lets you monitor video from such cameras using any Internet-connected device. Sensr also applies its motion-detection algorithms to each feed, turning even the cheapest webcam into a surveillance device. If a camera is aimed at, say, the front door, Sensr recognizes when a visitor–or a burglar–opens it and can send a text-message alert to the homeowner. The site stores an unlimited amount of low-quality video and for a small monthly fee will start keeping high-definition feeds later this year.

Beguelin says his service, which will also make it easy to share videos on YouTube, Facebook, and Twitter, is "about socializing these devices." Just as Facebook has become the hub for online identities, he hopes Sensr will become the hub for Web-connected cameras everywhere. He hopes cafés and restaurants will set up cameras so that customers can log on to Sensr, search for their local hot spot, and see how long the line is before leaving home. Ketan Kothari, an entrepreneur in Palo Alto, Calif., who heads to India during the Bay Area's rainy winter months, says he uses the service to monitor his flood-prone basement and arrange cleanups from abroad.

Sensr is "more for early adopters" at this point, says John Honovich, founder of IP Video Market Info. Internet services that focus on webcam features are still at a "very early market stage." Sensr, based in Incline Village, Nev., received $1.5 million in venture capital funding in January.

Before turning to entrepreneurship, Beguelin taught computer science at Carnegie Mellon and co-founded its Silicon Valley campus. The sabbatical in Vietnam was not just a way to decompress but also a chance to help "our kids to understand their heritage," says Beguelin, whose wife is from Vietnam. He's now exchanged his kite-surfing gear for what he says is "a lot" of cameras all over his home. "For a while, I was trying to catch a rat under the house," he says. "I had a night-vision camera so I could check the traps." Ⓑ *—Olga Kharif*

Payday ▶ Sold video-search site Truveo to AOL for $50 million in 2006
Hobby ▶ Learned to kite-surf during a yearlong sabbatical in Vietnam
Venture ▶ Sensr.net shares, stores, and helps monitor webcam video

Fonte: Bloomberg Businessweek, New York, p. 37-43, 21 e 27 February 2011.