

## BROWSE FREE OR DIE? US LIBRARY AT PRIVACY FORE

**LEBANON, New Hampshire:** A small library in New Hampshire sits at the forefront of global efforts to promote privacy and fight government surveillance - to the consternation of law enforcement. The Kilton Public Library in Lebanon, a city of 13,000, last year became the nation's first library to use Tor, software that masks the location and identity of Internet users, in a pilot project initiated by the Cambridge, Massachusetts-based Library Freedom Project. Users the world over can - and do - have their searches randomly routed through the library.

Computers that have Tor loaded on them bounce Internet searches through a random pathway, or series of relays, of other computers equipped with Tor. This network of virtual tunnels masks the location and Internet protocol address of the person doing the search. In a feature that makes Kilton unique among US libraries, it also has a computer with a Tor exit relay, which delivers the Internet query to the destination site and becomes identified as the last-known source of the query.

Alison Macrina, founder and director of the Library Freedom Project, said her organization chose Kilton for its pilot project because it had embraced other privacy-enhancing software the project recommended and because she knew the library had the know-how take it to the complicated

exit-relay stage. Tor can protect shoppers, victims of domestic violence, whistleblowers, dissidents, undercover agents - and criminals - alike. A recent routine Internet search using Tor on one of Kilton's computers was routed through Ukraine, Germany and the Netherlands. "Libraries are bastions of freedom," said Shari Steele, executive director of the Tor Project, a nonprofit started in 2004 to promote the use of Tor worldwide. "They are a great natural ally." There are about 7,200 relays and 1,000 exit relays worldwide, with more being added steadily, Steele said. The Tor Project is funded largely by the US State Department and other federal agencies, yet the Department of Homeland Security bristles at its use by civilians because it can be used to mask criminal activity.

Local police, at the behest of Homeland Security's Boston bureau, asked the Kilton library last July to stop using Tor. Its use was suspended until the library board voted unanimously at a standing-room-only meeting in September to maintain the Tor relay. "Kilton's really committed as a library to the values of intellectual privacy," Macrina said. "In New Hampshire, there's a lot of activism fighting surveillance. It's the 'Live Free or Die' place, and they really mean it." Homeland Security agent Gregory Squire, who initiated the

crackdown at the Kilton library, said he was not able to comment on Tor or last year's investigation.

### Ethics Code

Since 1938, the American Library Association has had an ethics code about protecting patrons' confidentiality. During the Cold War, librarians fought efforts by federal officials in 1953 to track and regulate patrons' reading habits by drafting the Freedom To Read statement. They opposed efforts by federal investigators in the 1970s to obtain records of patrons seeking information about explosives, and the ALA was targeted by Attorney General John Ashcroft for its "baseless hysteria" over the Patriot Act.

In 2005, a group of Connecticut librarians successfully fought an FBI demand to know who was using a computer at the Library Connection in Windsor on a particular date and time. A federal judge ruled the librarians' free speech rights were violated, and US Supreme Court Justice Ruth Bader Ginsberg ordered release of all records in the case. And in the wake of Edward Snowden's revelations about government surveillance, librarians have increasingly spoken out about government incursion and offered themselves as havens.

"I think it's lost on most people how much of their activity online is tracked and cataloged and

can be made available on a day-to-day basis," said Mark Rumold, senior staff attorney at the San Francisco-based Electronic Frontier Foundation. "Information disclosed to Google can be as diverse as the thoughts that are in your mind." At Kilton, Tor is installed on four computers in the center of the library. The computers' home pages feature the Tor icon, and users can opt to engage it or not. The library has run Tor workshops.

Lebanon Police Chief Richard Mello said last month he still has concerns. "Once you institute the Tor network, you essentially take those computers off the radar screen, so to speak," Mello said. For Kilton library user Robert Olcott, Tor gives him peace of mind that law enforcement and corporations won't track him when he researches topics such as predatory lending or global warming. It's nobody's business why he wants to do perfectly legal reading, he argued.

"If I'm looking at how many drones are currently approved to be flying in public airspace, somebody at Homeland Security might want to know why I want to know that," said Olcott, 65, a laborer by trade. "As a private citizen, I should be entitled to privacy in that inquiry." As to the number of users of Tor at Kilton, the library doesn't even know - because they are anonymous. — AP

## CAN GOOGLE GLASS HELP AUTISTIC KIDS READ FACES?

**SAN JOSE, California:** Like many autistic children, Julian Brown has trouble reading emotions in people's faces, one of the biggest challenges for people with the neurological disorder. Now the 10-year-old San Jose boy is getting help from "autism glass" - an experimental device that records and analyzes faces in real time and alerts him to the emotions they're expressing. The facial recognition software was developed at Stanford University and runs on Google Glass, a computerized headset with a front-facing camera and a tiny display just above the right eye.

Julian is one of about 100 autistic children participating in a Stanford study to see if "autism glass" therapy can improve their ability to interpret facial expressions. "There's not a machine that can read your mind, but this helps with the emotions, you know, recognizing them," Julian said. Julian wears the device each day for three 20-minute sessions when he interacts with family members face-to-face - talking, playing games, eating meals. The program runs on a smartphone, which records the sessions.

When the device's camera detects an emotion such as happiness or sadness, Julian sees the word "happy" or "sad" - or a corresponding "emoji" - flash on the glass display. The device also tests his ability to read facial expressions. "The autism glass program is meant to teach children with autism how to understand what a face is telling them. And we believe that when that happens they will become more socially engaged," said Dennis Wall, who directs the Stanford School of Medicine's Wall Lab, which is running the study.

Stanford student Catalin Voss and researcher Nick Haber developed the technology to track faces and detect emotions in a wide range of people and settings. "We had the idea of basically creating a behavioral aide that would recognize the expressions and faces for you and then give you social cues according to those," said Voss, who was partly inspired by a cousin who has autism. Google provided about 35 Google Glass devices to Stanford, but otherwise hasn't been involved in the project. The Silicon

Valley tech giant stopped producing the headset last year after it failed to gain traction, but the device found new life among medical researchers.

### Wearable Technologies

Brain Power, a Cambridge, Mass.-based startup, is also developing Google Glass-based applications to help children with autism improve their face-reading abilities and social skills. Autism advocates are excited that researchers are developing technologies to help the estimated one in 68 American children diagnosed with autism spectrum disorder. "Glass and wearable technology are the future. They're going to play a pivotal role in how we understand, manage and diagnose disorders like autism," said Robert Ring, chief science officer at Autism Speaks.

Currently, many autistic children learn to read facial expressions by working with therapists who use flashcards with faces expressing different emotions. The Stanford team hopes autism glass can provide a convenient, affordable therapy that families can do at home. "Kids with autism are not getting enough of the care that they need for as long as they need it, and we need to fix the problem," Wall said. If the study shows positive results, the technology could become commercially available within a couple years, Wall said.

"Anything that can help this population is very welcome and very important, but even the best technology will never be enough because we are dealing with a population with often very, very profound needs," said Jill Escher, president of Autism Society San Francisco Bay Area. The study is still in its early stages, but Wall said participating children have shown gains in their face-reading abilities and family feedback has been encouraging.

"It has helped our son who's using the Google Glasses connect with the family more," said Kristen Brown, Julian's mother. "I think the glasses are a positive way to encourage a kid to look someone else in the face." Julian also gives the device positive reviews: "I really think it would help autistic people a lot." — AP



URAYASU, Japan: In this March 24, 2016 file photo, Line Corp Chief Strategy and Marketing Officer Jun Masuda speaks during a press conference of Line Conference Tokyo 2016. — AP

## LINE STRUGGLES TO SHOW GROWTH PLAN CAN WORK BIGGEST TECH IPO OF THE YEAR

**TOKYO:** In delaying its IPO by two years, Japanese messaging app company Line Corp bought time to correct weak financial reporting controls, work on its business plan, bolster staffing - and left billions of dollars on the table as its valuation shriveled. Line's initial public offering in the next three weeks is set to raise about \$1 billion, which given a global drought of such deals could make it the biggest tech listing this year, but sceptical fund managers point to tepid growth in Line's home market and doubts about its prospects for regional expansion. They also question whether its advertising revenue strategy will work.

In seeking to earn more from its major Asian markets of Japan, Thailand, Indonesia and Taiwan, Line will try to generate more revenue from services such as advertising and offer more localized products, its IPO filing said. The bulk of Line's revenue comes from games and sales of emojis and electronic stickers, including Brown the bear and Coby, his flutulent rabbit girlfriend. "Localization of the service, of the marketing, of the stickers that we provide - this is very important," CEO Takeshi Idezawa told Reuters in April. Fund managers who have watched Line's growth slow in a crowded global messaging app market assess the plan with caution. "I'm not interested," said Yasuo Sakuma, portfolio manager at Bayview Asset Management, which manages 270 billion yen (\$2.64 billion). "Its growth outlook is very poor." "Among the four countries that it's focusing on, only Indonesia has big room for growth in use," he added. "Even there, the business outlook is not that easy."

Growth in Line's monthly active users has tailed off after tripling across the world over the past three years. Last year, user numbers rose

just 13 million to 218 million at the end of March, the IPO filing showed. The company isn't providing much visibility about the future either - it says in its filing that limited operating history makes it "difficult" to forecast future results. Globally, Line is the seventh-most used messenger app, data from researcher Statista shows, behind the likes of Facebook's WhatsApp and Tencent's WeChat.

### Earthquake Aftermath

The company will fix its IPO price range today. There is no change to the listing's schedule following Britain's vote to leave the European Union, a Line spokeswoman said on Friday. The dual New York and Tokyo listing, set for July 14-15, would value Line at about \$88 billion (\$5.75 billion) and make it the country's largest listing since Japan Post's \$12 billion offering last year. Line's likely valuation is far less than the \$10 billion-\$20 billion that was expected by investors when South Korean parent Naver Corp previously talked of a Line listing in 2013-2014, although Line may not have had much choice but to wait. Line declined to comment, citing a media blackout period ahead of the IPO.

Line's messaging app was launched as NHN Japan in the aftermath of Japan's 2011 earthquake and tsunami to overcome downed communications, growing unexpectedly to become the country's dominant mobile messaging platform over the next few years. However, in that period, it identified what it described in its IPO filing as "material weaknesses" in controls over financial reporting. Line has now tightened board and management approval for major transactions, it said in its prospectus, and crafted a strategy focusing on Japan, Thailand,

Indonesia and Taiwan, which account for more than half its users.

Line has also bolstered staff numbers by recruiting over 750 workers between December 2014 and March, its IPO filing shows, with designers and engineers among the recruits. It has around 2,540 full-time employees.

### Pushed as Value Play

Idezawa, who became Line's chief executive in March last year, has been key to tightened procedures, a person familiar with the matter said. Idezawa is known for his strictness on compliance-related matters, the person added. Idezawa was previously chief executive of internet company Livedoor, joining that company a year after it was hit by a high-profile 2006 accounting scandal. "When Line was first seriously considering an IPO around 2013, the overall company was pretty disorganized," said a person involved in the IPO. "It was very much still a venture in terms of mindset. So a lot of people were hired to strengthen the company."

Line has pitched its IPO to investors in terms of value and steady returns instead of explosive growth potential. While that story has been met favorably by Japan's risk-averse retail investors - Tokyo brokerages including Daiwa Securities say retail investors have shown strong interest in Line shares - fund managers are wary of Line's ad-driven growth push. "I went to the company's meeting with investors... but nothing moved me," said a fund manager at a major Japanese asset management firm who declined to be named because of company rules against discussing individual shares. "It's not clear how it can make money out of its advertisement business." — AP



STANFORD, California: Julian Brown talks with his mother Kristen during a meeting with Jena Daniels, a clinical research coordinator at The Wall Lab, on June 22, 2016. — AP

## PROGRAM LETS COMMUTERS DRIVE SOME, CYCLE THE REST

**BOSTON:** Traffic is crawling bumper to bumper on Soldiers Field Road, a major artery leading to Cambridge and downtown Boston, as Mark Rabinsky parks his car near the Charles River, takes out his bike and prepares to cycle the rest of the way to his job at Harvard University. "My ride is all along the river. It's such a beautiful ride every morning," said Rabinsky, one of a small but growing number of commuters who avoids the last few miles of rush hour gridlock by utilizing Park & Pedal. Launched last year and recently expanded, the program offers free parking at 19 strategically located lots near major employment centers and an opportunity for people to easily complete their commute on two wheels instead of four.

The initiative is attracting attention from other US and world cities, according to Dave Montague, the founder of a company that makes folding bikes and who first approached Massachusetts officials with the idea. Representatives from as far away as Copenhagen, Denmark, and Christchurch, New Zealand, have contacted him for information, he said. Although it has no exact count on the number of Park & Pedal users so far, benefits touted by the state include less traffic, reduced carbon dioxide emissions and healthier lifestyles. Boston, like other urban areas, has strived in recent years to become more pedal friendly, designating bike lanes on major streets and rolling out Hubway, a popular bike-sharing program. Still, bicycle commuting is

often seen as a viable option for those who live in or near the city, far less so for the typical suburbanite. "Your average American lives 12 miles from work, but we did a survey and your average Bostonian does not want to ride a bicycle 12 miles. It's too far for them in the morning to get to work," Montague said.

That's clearly true for Rabinsky, who lives about 18 miles from work in Wayland. It's also true for avid cyclist Jonathan Zarkower, who found it impractical to make the approximately 50-mile round trip entirely by bike from his Framingham home to his job at Akamai Technologies in Cambridge but is now a frequent Park & Pedal user. "I'm saving a lot of money, getting some great exercise and doing something I really enjoy doing," Zarkower said.

The program is also attractive to people who live nearer to Boston like Dan Heffernan, an attorney from Newton who used to cycle all the way to his Government Center law office but decided to curtail as he got older. "Having someplace I could go that's a little closer is great," he said, before climbing on his bike to pedal the last several miles. Beyond the added commuting option, advocates hope to entice less experienced riders who - unlike hardened urban road warriors - are more squeamish about cycling amid cars, buses and trucks on noisy and congested city streets.

Many of the designated Park & Pedal lots are situated near bike paths like the one along the river where riders need not compete with cars. Steve Taylor, communications manager

for The League of American Bicyclists, said the term "interested but concerned" is often applied to people who might consider commuting by bike but are discouraged by long distances or safety fears. The Boston model and others like it could catch on, he said, with other cities trying to lift those barriers.

The Mid-Ohio Regional Planning Commission and the city of Columbus, Ohio, launched a program, also named Park & Pedal, last May designed specifically for commuters who now drive 5 miles or more to work. Some smaller-scale programs are also in existence, such as Park and Cycle at England's University of Cambridge, where staff members can even store their bikes and helmets overnight in personalized lockers. — AP