## Back to the Future: Tech Trends for 2016

Global design and strategy firm frog, which has a client list ranging from United Nations to Nike to Microsoft, lists the top tech trends that will define 2016

1 Video Games to Get Well Soon
Video games are in. Akili Interactive's games have gone through 8 clinical trials for the treatment of autism and depression

2 Haptic Feedback Will Spreadout
We think of haptic feedback as buzz of a smartphone. But haptics are ready to spread from automotive to healthcare
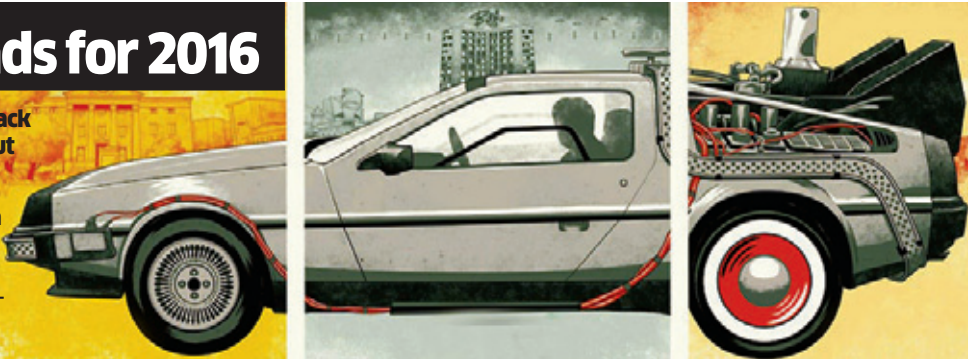
3 Friendship as Service!
In China, you can "rent" a boyfriend through Taobao. In 2016, the trend will expand to "rent" a professional contact and even possibly friendship as a service

4 Virtual Reality to Bring us Closer
Virtual reality is going to bring people closer. The "presence" that people feel with a VR headset will create a sense of empathy that you never get with a 2D screen

5 Biometrics Review Won't Lie
Your heartbeat and sleep patterns will help rate products and services. Biometrics will give proof of how good the food is at a restaurant or how scary a movie is

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Tweet OF THE DAY

DAYMOND JOHN
@TheSharkDaymond

Rise & Grind! Keep in mind, life is more than what you do. It is how you react to everything around you that counts.

Daymond John is an entrepreneur and a 'shark' on US TV show Shark Tank

Tech Buzz

LG G5 to Get a Secondary Display

With LG all set to release their next flagship by February, specs have started to leak out. A report says LG G5 will sport 5.3-inch primary display and a secondary "always on" display that will show details such as time, weather, date and battery icon. –BI

1 billion

Total number of rides taken by Uber users worldwide, according to the company

Cheaper Xbox to Switch off Apple TV

Microsoft is considering a low-cost version of the Xbox One video game console designed to take on the Apple TV, says reports. Sams, a long-time Microsoft reporter and blogger, says that he's heard that this smaller Xbox One console would be designed to only run games and apps from the Windows Store app market. It would be sold alongside existing models of the Xbox One, not replace it. –BI

Jargon Buster

HMD
A head mounted display or a HMD is a headset gear with a monitor for each eye displaying 3D graphics operating on virtual reality systems. It can just be a pair of goggles or a full helmet.

Quick Byte
ANIRBAN BORA

Uber just gave its billionth ride
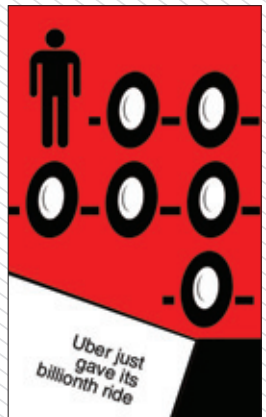
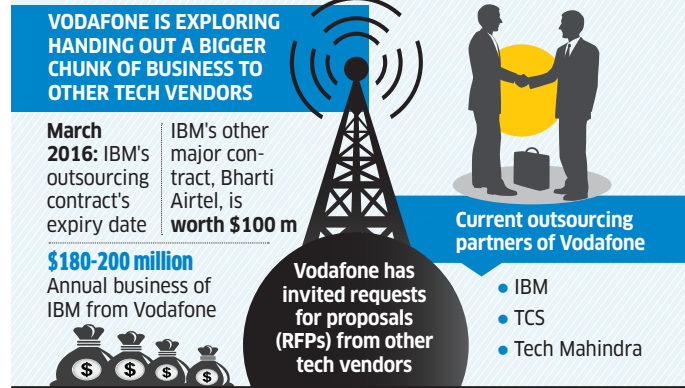# This Time IBM may Have to Share the $1-billion Voda Pie

Telecom giant is exploring options to reduce its reliance on one IT outsourcing company

Anirban.Sen@timesgroup.com

Bengaluru: Vodafone India, which is in the process of negotiating the extension of its $1-billion outsourcing contract with IBM that expires in March 2016, is currently exploring options that include handing out a bigger chunk of business to other technology vendors and reduce its reliance on IBM which has dominated the domestic telecom outsourcing market over the past decade, according to three people familiar with the discussions.

The contract discussions will enter the final round of negotiations over the coming weeks and at the moment IBM is battling hard against domestic and multinational rivals to save a lion's share of one of its largest telecom outsourcing contracts in Asia, the people mentioned above said. All of them requested anonymity as these discussions are confidential.

The deal talks between Vodafone, IBM and other vendors come barely two years after the renewal of the landmark Bharti Airtel outsourcing contract, which saw the scope and share of IBM's revenues from the deal being reduced after the deal was renewed. IBM currently gets about $100 million of annual business from the contract, the people mentioned above

End of Monopoly?

VODAFONE IS EXPLORING HANDING OUT A BIGGER CHUNK OF BUSINESS TO OTHER TECH VENDORS

March 2016: IBM's outsourcing contract's expiry date

IBM's other major contract, Bharti Airtel, is worth $100 m

$180-200 million Annual business of IBM from Vodafone

Vodafone has invited requests for proposals (RFPs) from other tech vendors

Current outsourcing partners of Vodafone
• IBM
• TCS
• Tech Mahindra

GURURAJ

said. "The Vodafone deal is not exactly the same as the Bharti-IBM deal — in the original Bharti deal, IBM had a monopoly status and was the only vendor in the picture. Whereas in the current Vodafone deal, we have been reducing our dependence on IBM over the past couple of years — other vendors such as TCS and Tech Mahindra have also been given small parts of the contract," said one of the people mentioned above, who is a Vodafone source.

ET had reported in September that Vodafone had started talks to renew the contract. Later during 2015, Vodafone invited requests for proposals (RFPs) from other technology vendors — a clear sign that Vodafone was trying to reduce its reliance on IBM, the people mentioned above said.

Vodafone and IBM declined to comment for the story.

"We regret we will not be able to offer any comment in this regard," a Vodafone spokesperson said. The negotiation talks for the Vodafone deal comes at a crucial time for IBM — over the course of the next 12 months, another significant telecom outsourcing contract with Idea Cellular will also come up for renewal and IBM will be keen to protect its lead in India's telecom outsourcing battleground, where over the past decade it trumped homegrown software giants such as TCS and Infosys and won important deals from Airtel, Vodafone and Idea.

The 10-year Idea contract is currently worth about $800 million, the people mentioned above said.

IBM currently gets about $180-200 million in annual business from Vodafone in India, the people mentioned above said. Vodafone is still in the process of deciding whether to keep critical parts of the contract with IBM or hand it out to new vendors, sources said.

"Procurement teams are under fire to drive down costs. However, what's shifted in the market is a realization that outsourcing partners can also provide innovation if properly managed. The Vodafone team has to figure out if the full IBM portfolio is compelling enough to stay with IBM and to figure out what parts of IBM are worth it as a package versus just outsourcing. The big trend for 2016 is to reduce the number of service providers and for service providers to deliver on more than one capability," said Ray Wang, founder and chairman at enterprise research firm Constellation Research.

'P2P Browsing Will Grant Us Basic Rights'

CEO of BitTorrent Eric Klinker says co will launch a P2P browser to keep internet free & fair

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Pune: As president and CEO of BitTorrent, the world's leading peer-to-peer (P2P) file transfer protocol, it's not surprising that Eric Klinker is a firm believer in net neutrality. In India this week on a short visit, Klinker made a whirlwind trip to Pune to address tech enthusiasts at a talk arranged by Pune Tech and GS Lab, a company cofounded by Shridhar Shukla, Klinker's PhD thesis advisor back in college.

Klinker told **ET** that his company would continue to remain at the forefront of keeping the internet free and open, and is working on various ways to do that. "We are close to launching our browser — right now it's called Project Maelstrom but we'll change that name soon. This at its core, will change the way we access the internet," said Klinker. The browser will retrieve web content from peer-to-peer distributed torrents instead of traditional servers. It can function as a regular browser that accesses sites over standard HTTP/HTTPS protocols, but the program also contains the ability to grab websites packaged as torrents and display them. Over time, the company may look at making this an open source project. "We need this kind of radical thinking to ensure that the internet remains free, otherwise we'll have a situation where Free Basics is the norm," he said.

He also voiced his concerns about the way things were moving at present, with the debate on net neutrality gaining prominence world over. The internet as we know it needs to be nurtured and protected for future generations. "If current

FREE FOR ALL

We need this kind of radical thinking to ensure that the internet remains free, otherwise we'll have a situation where Free Basics is the norm

trends continue, the future Internet will not be open or neutral. Apps, social networks, everything will be centralised and all about control," said Klinker.

Over the last few years, BitTorrent has evolved from offering a P2P data transfer protocol to having a full range of products in the P2P model that would compete with what people currently use. Earlier this year it launched Bleep, an encrypted instant messaging service. "The content of your messages may be secure in current instant messaging applications, but there is a wealth of information available at the server about who is talking to whom. This so called metadata is at the heart of the current debate and is not readily accessible in a distributed messaging system," said Klinker. Similarly, Sync is a P2P 'cloud' or a file syncing system which doesn't store information on the server and hence is safe from any potential hacking threats.

DEITY LOOKS AT ALTERNATIVES FOR AUTHENTICATION

Digital India Loses Aadhaar as SC Restrictions Kick In
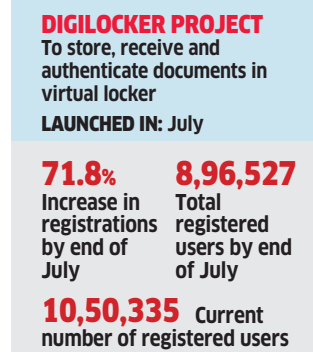
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New Delhi: The Supreme Court's restrictions over the Aadhaar project has taken the wind out of several marque projects under the Digital India programme, including the ambitious project of Digital Locker.

The department of electronics and information technology (DEITY) is now working on alternative options that will act as means of authentication along with Aadhaar to revive some of these projects. According to a senior government official, there are around five projects under Digital India for which alternatives are being discussed currently.

Take for instance the DigiLocker project, which is a way to store, receive and authenticate documents in the virtual locker on the Internet, made a good start after being formally launched by the Prime Minister in July this year only to have stagnated in the following months due to the uncertainty over their linkage with Aadhaar. The number of users registered on the platform swelled by 71.8% to 8,96,527 at the end of July but has been registering low single digit growth since August — when the first Supreme Court order came on Aadhaar restricting its use. At the end of December, the number of users who are on the DigiLocker platform 10,50,335.
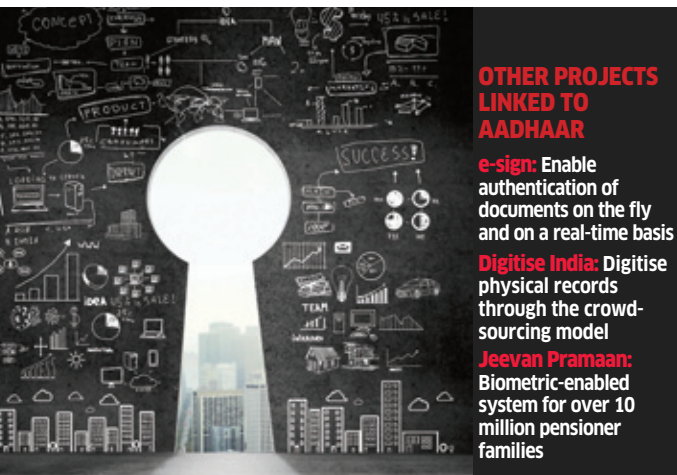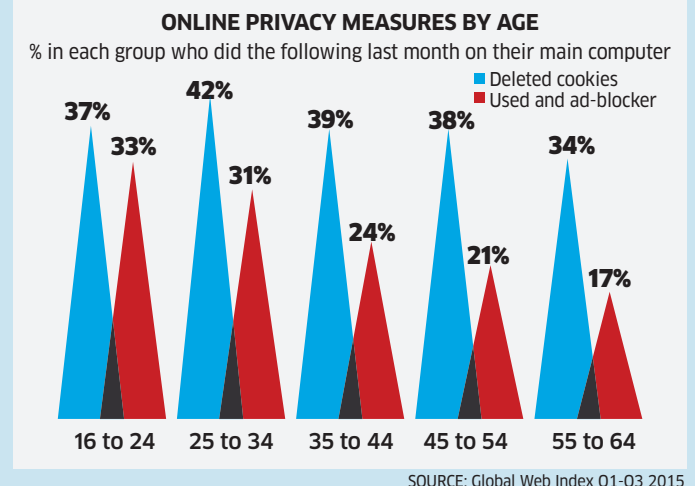
The official said that for DigiLocker, authentication means such as PAN card, eKYC of the banks, and digital signatures are some of the other options which are being considered. "Even wit

Digital Plan Get Locked Out

DIGILOCKER PROJECT
To store, receive and authenticate documents in virtual locker

LAUNCHED IN: July

71.8% Increase in registrations by end of July

8,96,527 Total registered users by end of July

10,50,335 Current number of registered users

SIDDHARTH

OTHER PROJECTS LINKED TO AADHAAR

e-sign: Enable authentication of documents on the fly and on a real-time basis

Digitise India: Digitise physical records through the crowdsourcing model

Jeevan Pramaan: Biometric-enabled system for over 10 million pensioner families

CHALLENGES AHEAD
Aadhaar faces challenges on privacy – some critics are concerned about access to information on individuals

hout the Supreme Court's mandate, we have to give other options to citizens since some of them many not have access to Aadhaar," the official added. The person said that by linking these projects only through Aadhaar, the government doesn't want to make it mandatory in any way. "But, the inherent advantage that Aadhaar had of seamless authentication can't be taken away," said the official adding that with authentication means, the government is adding a layer which is the same as verifying documents in the physical world.

Other projects which are inherently linked to Aadhaar include e-sign, Jeevan Pramaan or Digital Life Certificate for pensioners, and Digitise India, the government records digitisation drive project among others.

While Jeevan Pramaan is a biometric enabled system built on Aadhaar for over 10 million pensioner families in India to provide digital life certificates for disbursement of their pensions, e-sign is designed to enable authentication of documents on the fly and on a real-time basis through the Aadhaar authentication platform.

It is being pitched as a convenient alternative for the current process of getting a digital signature, which is cost intensive, time consuming and relatively unsafe. Similarly under the Digitise India platform, the government has roped in common citizens to digitise its physical records through the crowdsourcing model. The identity and authentication of the crowd agents is done through the Aadhaar number and their remuneration is also credited to their Aadhaar linked bank account number.

ET has reported earlier this week that the government is getting ready to convince the Supreme Court about the use of Aadhaar in improving governance.

The cabinet secretary will helm the drafting of a strategy along with senior government secretaries on extending Aadhaar to more government services. Meanwhile, the government will seek to convince the Supreme Court about Aadhaar's utility. Aadhaar faces challenges on the privacy front with some critics concerned about access to the information of individuals.

Ad-Blocking is Here to Stay

The heaviest consumers of the internet, 16-24s, are at the very forefront of ad-blocking, with over a third of them are blocking ads. But that presents something of a paradox: older groups are the most concerned about their privacy and personalised ads and yet are the least likely to be blocking ads. For companies, that is something to think about

ONLINE PRIVACY MEASURES BY AGE
% in each group who did the following last month on their main computer

■ Deleted cookies
■ Used and ad-blocker

	16 to 24	25 to 34	35 to 44	45 to 54	55 to 64
Deleted cookies	37%	42%	39%	38%	34%
Used and ad-blocker	33%	31%	24%	21%	17%

SOURCE: Global Web Index Q1-Q3 2015

Electrifying History of the e-Cars

Electric cars are nothing new. They actually have a rich history. Read on

"i could either watch it happen or be part of it"
-Elon Musk

In 1899 and 1900, electric vehicles outsold all other types of cars. In fact, 28% of all 4,192 cars produced in the US in 1900 were electric

They had key advantages over gasoline- and steam-powered cars in 1900s. For one, they didn't have the smell, noise, or vibration. The were also easier to drive

By 1920s, Henry Ford's mass production of combustion engines made gas-powered cars significantly cheaper than electric cars.
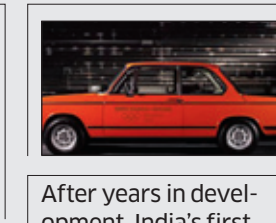
Miniature commuter cars became popular around 1970s. One was 'CitiCars' whose top speed of 44 mph, a normal cruise speed of 38 mph, and a range of 50 to 60 miles

In the 60s &70s interest in electric cars began to grow again due to pollution concerns. Firms started looking at e-cars again

Meet Elcar which had a top speed of 45 mph, a range of 60 miles

Firms began investing more in the tech. BMW debuted its first electric car in the 1972 Olympics

After years in development, India's first e-car 'Reva' came out in 2001, though the target market was UK. Revamped Reva had India on mind

Tesla has big plans to produce its first mass-market car, called the Model 3, by 2017. The Model 3 will feature a range of more than 200 miles and price of about $35,000