Prof. S Sadagopan
What is Hot in IT in 2014
A perspective from India

Article Index 2014

IEEE India Info

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IT in March 2014

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General

- *Lok Sabha* (Indian Parliament) Elections announced on March 5, 2014
- Supreme Court asks UIDAI (UID Authority of India) to withdraw the order making AADHAR (Universal ID) mandatory on March 25, 2014
- Russian President Putin signs the Ascension of Crimea to Russia into law on March 21, 2014
- Malaysian plane goes missing on March 8, 2014 for days adding to the mystery everyday

Markets

- San Francisco-based global music streaming service **Rdio** (founded by Skype co-founder Janus Fris) decides to acquire Indian music start-up *Dhingana* (founded by Snehal & Swapnil Shinde) on March 13, 2014
- Indian stock market index *Sensex* crossed 22,000 for the first time on March 2014
- **Facebook** buys Virtual Reality company **Oculus** for $ 2 billion on March 26, 2014
- **SAP** to buy Chicago-based **Fieldglass** (cloud-based vendor management software) company on March 26, 2014
- Chinese major **Alibaba** buys minority stake for $ 215 million (on a $ 1.1 billion valuation) in US-based start-up **Tango** (Chat App) on March 29, 2014

Products

- **Yahoo** launches new Website in India on March 8, 2014
- **Nokia** X Android phone launched in India on March 10, 2014
- **Moto** X launch in India on March 19, 2014 at Rs 23,999
- **Apple** replaces **iPad 4 with Retina display** as replacement for iPad 2 on March 21, 2014
- **Microsoft** launches **Office for iPad** in March 27, 2014
- **Samsung** launches **Galaxy 5S** smartphone at Rs 53,000 in India on March 27, 2014

Indian IT companies

- **Flipkart** makes history by crossing $ 1 Billion turnover on March 6, 2014 (78 months compared to 95 months for Amazon to reach the Billion Dollar status)
- **TCS** rated No 1 employer in Europe (Top Employers Institute) for the second time in a row, signs deal with Garuda Airlines in March 2014; TCS to manage much of Thomson Reuters operations in India from April 2014
- Chennai-based **TNQ** to power science-publishing major Elsevier "Proof Central" (connecting authors and publishers)
- Indian mobile handset major **Karbonn** expects Rs 8,000 crores business 2014-15

MNC Companies in India

- **IBM** opens a new Lab with $ 100 million investment in Bangalore in March 2014
- **Cisco** talks of India's contribution to Cisco sales to touch 5% in 2014-15; to invest $ 1 billion in India on cloud infrastructure in 2014-2015

5

- **AmEx** decides to use Bangalore-based **EzTap** (Sanjay Swami founded startup) on March 20, 2014
- Japanese telecom major **NTT** commissions it's Tier 3 data center with 1,00,000 sq. ft. space (Net Magic Data Center) in Bangalore on March 26, 2014
- German chemicals major **BASF** set to start its R & D center in Thane, Mumbai in the year 2014
- **CA Tech** expands India operations in Bangalore
- **Panasonic** decides to make India regional hub in 2014
- **Starbucks** talks of fastest growth in India in its history (40 stores in 17 months - Oct 2012 to Feb 2014 - with 1,000 employees)
- **Nokia** Chennai plant dispute delays Nokia merger into Microsoft; gets another Rs 2,400 crores tax call from State Government (an earlier Tax dispute of even larger value pending with Central Government)

Telecom
- **Airtel** launches 4G /LTE services on iPhone 5S on March 2, 2014 (at 3G prices)

Education & Research
- **Prof. Anurag** Kumar to take over as **Director of IISc** (Indian Institute of Science) in August 2014 from Prof P Balaram
- Russian mathematician **Prof. G Sinai** is the **Abel Prize** (Mathematics Nobel) winner of 2014

Infrastructure
- Bangalore *Namma Metro* launch of Reach 3 & 3A (Sampige Road to Peenya Industrial Estate) starts operations in March 1, 2014

Applications
- IMT (Instant Money Transfer) linking ATM to mobile phone started by Bank of India on March 24, 2014

People
- Infosys founder & former CEO **Nandan Nilekani** (Congress candidate) and former CFO **V Bala** (AAP candidate) take plunge into politics and contest in Parliament Elections in Bangalore on April 17, 2014
- Infosys Enterprise Head Chandrashekar Kakal to joins L&T Infotech as COO
- RBI Deputy Governor KC Chakrabarty announces his decision to quit 3 months early (April instead of June)

Some interesting numbers
- Apple, Amazon, Google in No. 1, N0. 2 and No. 3 "Most Admired companies" 2014 list (Fortune)
- IRCTC sells a record 5,80,000 tickets in a single day on March 20, 2014
- Indian online retail has 1 million traders and $ 12.6 billion sales today (IAMAI); **Amazon India** stocks 1.5 crore items and surpasses Indian e-commerce majors **Flipkart** and **Snapdeal**
- English word "ok" completes 175 years (first appeared in "Boston Morning Post")
- **Telecom subscriber** base on January 31, 2014 stood at 922.04 million with 893.31 million mobile subscribers and 28.73 million wire-line subscribers (with net addition of 7.02 million mobile subscribers and net reduction of 0.17 million wire-line subscribers in January 2014) (TRAI Press Release No. 13/2014 dated March 12, 2014)
- **India's Foreign Exchange** on March 31, 2014 was at $ 303.67 billion (RBI)
- **Indian Rupee** stood at 59.88 against USD on March 31, 2014 (RBI)
- On March 31, 2014 **BSE Sensex** and **NSE NIFTY 50** (Indian stock market indices) were at 22,386 and 6,704 respectively (Reuters)

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IT in April 2014

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General

- Government grants Bank licenses to IDFC (Infrastructure finance company), Bandhan (micro finance company) on April 2, 2014
- *LokSabha* (Indian Parliament) Election starts on April 7, 2014 (results expected on May 16, 2014)
- India's factory output falls to the lowest level in 2 years in March 2014

Technology

- **ISRO** launches IRNSS 1B, the second in the series of navigational satellites to provide GPS-alternative on April 2, 2014
- *Mangalyaan* (Indian Mars Mission) crosses 340 million km and crosses half way mark on April 9, 2014
- Microsoft **Cortana** is the latest entrant to voice-based personal assistants

Products

- **Amazon** launches **Fire TV** (set top box) on April 4, 2014
- **Microsoft Windows XP** reaches end of life on April 7, 2014
- Indian mobile handset major **Micromax** launches Phablet**Canvas Doodle 3** on April 22, 2014
- **Microsoft** launches **Windows Phone 8.1** (with Cortana Personal Assistant), Windows 8.1 Update, **Nokia Lumia 930** (high-end Windows Phone) & **Nokia Lumia 630 /635** (low end Windows phone), and, makes **Windows free for OEM's on devices with less than 9" screen size** on April 4, 2014 (Build Conference); makes multi-party video calling over **Skype** free on April 28, 2014

Markets

- Global Pharma major **Novartis** creates history by swapping billions of dollars worth product portfolio with **GSK Pharma** and **Eli Lily** on April 22, 2014
- Indian Pharma major **SunPharma** buys another Indian pharmaceuticals major **Ranbaxy** (from Japanese **Daiichi**) for a whopping all shares deal of $ 4 billion on April 7, 2014, making it the fifth largest generic drug company globally
- Romesh Wadhwani founded **Symphony Teleca** acquires Pradeep Singh founded **AditiTechnologies** on April 9, 2014
- India's Big Six IT Services major **TechMahindra** acquires **FixStream** (Big Data startup) on April 21, 2014 for $ 10 million
- Real estate portal **CommonFloor** acquires **Flat.to**(start-up focused on students / bachelors accommodation) on April 21, 2014
- US-based Indian IT services major **Cognizant** set to buy US-headquartered "itaas" digital video solution on April 22, 2014
- Apple, Microsoft, TCS, Infosys announce good results for January – March 2014 quarter

Indian IT Companies

- **TCS** enters Global Top 10 (replaces **CSC**) in April 2014
- **TCS Mitsubishi** JV to add $ 600 million to TCS annual revenue next year

Global IT Companies in India

- **Nokia Mobile** becomes **Microsoft Mobile** on April 25, 2014
- **vmWare** set to invest $ 500 million in Bangalore in 2014

People

- **Cognizant** president R **Chandraskearan** is **NASSCOM** Chairman from April 1, 2014; takes charge from Mindtree Founder N Krishna Kumar
- Dr S **Ramani** (former TIFR Scientist, NSCT Director, HP Labs Bangalore Head and IIIT-B Faculty member) is the first Indian inducted into Internet Society's "Internet Hall of Fame" on April 8, 2014 in Hong Kong
- Well-respected Indian industrialist **Ratan Tata** gets the highest civilian award Knight Grand Cross of the Order of the British Empire, the only Indian to be given this particular awards since India's independence on April 10, 2014
- Bangalore-born American **Vijay Seshadri** wins **Pulitzer Prize 2014** on April 15, 2014
- **Justice Lodha** sworn is the 41st **Chief Justice of India** on April 27, 2014
- India-born **Rajeev Suri** takes over as **Nokia global CEO** on April 28, 2014
- **Arvind Kejriwal** of **AAP** and **Narendra Modi** of **BJP** in "**100 Most Influential List of 2014**" of **TIME Magazine**
- **US Ambassador to India** Nancy Powell logs out of India in April 2014

Telecom

- **TDSAT** rules that 3G spectrum sharing is legal, setting aside the Telecom Ministry order; quashes the Rs 1,200 crores penalty on telcos on April 29, 2014

Infrastructure

- **GMR** lands $ 390 million **Cebu Airport** deal from Philippines on April 5, 2014 to renovate and operate the Airport
- Mumbai gets the first double decker flyover on April 18, 2014 connecting Santa Cruz and Chembur
- **Jindal Steel** commissions **Vijayanagar cold rolling Mill** on April 25, 2014 expected to make steel available at lower cost to automotive car manufacturers in India

Interesting Applications

- **BJP** Prime Ministerial candidate **Narendra Modi** uses 3D holographic projection to reach out; "speaks" to Bangalore citizens on April 11, 2014 remotely, with stunning quality

Interesting Numbers

- **Telecom subscriber** base on February 28, 2014 stood at 931.95 million with 903.36 million mobile subscribers and 28.59 million wire-line subscribers (with net addition of 10.05 million mobile subscribers and net reduction of 0.13 million wire-line subscribers in February 2014) (TRAI Press Release No. 21/2014 dated April 23, 2014)
- **India's Foreign Exchange** on May 2, 2014 was at $ 311.86 billion (RBI)
- **Indian Rupee** stood at 60.42 against USD on April 30, 2014 (RBI)
- On April 30, 2014 **BSE Sensex** and **NSE NIFTY 50** (Indian stock market indices) were at 22,417 and 6,696 respectively (Reuters)
- **Facebook** users in India cross 100 million on April 9, 2014
- Indian **Internet speed** slowest in APAC region - 20 MBPS of Korea Vs1.5 MBPS of India (**Akamai** Report April 23, 2014)
- **MundraPort** creates history carrying 100 million tons of cargo during April 2013 to March 2014, the first ever for any Indian port
- **CEA** (Central Electricity Authority) talks of 1,023 billion units of electricity generation in India during 2013-14; **Indian solar power capacity** crosses 2,500 MW capacity on March 31, 2014 with Gujarat accounting for 750 MW
- India has a **housing shortage** of 25 million homes as of April 2014; there is a paradox of 11 million vacant homes too (Urban Development Ministry
- Toyota makes 9.83 million cars and No 1 in the world, expects 10 million this year

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IT in May 2014

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General

- General Elections 2014 saw highest ever poll percentage of 66.38 during April
  -May 2014; it is truly an Election where Social Media (Facebook, Twitter, Blog) and Electronic
  Communication (e-Mail, SMS, WhatsApp, 3D Holographic projection) played a decisive role. BJP
  gets absolute majority on May 17, 2014 with 282 seats; NDA gets 333 seats. President appoints Nar-
  endra Modi as Prime Minister of India on May 19, 2014; the new PM takes charge in May 26, 2014

- Odisha State elects Naveen Patnaik as Chief a Minister for the fourth time

- Thai Prime Minister gets ousted by Thailand Constitution Court on May 7, 2014 leading to further
  instability in the country followed by military coup on May 20, 2014

- Indian car brand **Ambassador** becomes history on May 31, 2014 with **Hindustan Motors**deciding
  to stop production from June 2014

- **Airbus 380** service starts in India with the first flight from Singapore landing in Delhi on May 30, 2014

Technology

- **Airbus**-made electric plane **E-Fan** takes flight on May 12, 2014

Markets

- New Jersey based **Kirusa** takes over Bangalore-based Messaging App company **Cooltok** on May
  11, 2014

- **AT&T** decides to buy **DirecTV** for $48.5 billion on May 18, 2014

- **Apple** buys **Beats Audio** and **Beats Electronics** in a $ 3 billion deal on May 28, 2014

Products

- **Sony** launches **Xperia Z2** smartphone at a price of Rs 49,000 on May 8, 2014

- **Motorola** launches **Moto E** phone priced at Rs 5,999 on May 13, 2014; it was an instant success
  with 100,000 units ordered on Flipkart (exclusive channel) within 24 hours and bringing Flipkart
  site down due to excessive hits!

- **Microsoft** launches **NokiaLumia 630/635** Low cost Windows Phone in India priced Rs 9,999 on
  May 12, 2014; launches **Surface Pro 3**, globally on May 20, 2014

Indian IT companies

- Coastal small town in Karnataka's Udupi based **Robosoft** subsidy **99Games Online** creates game
  for Disney Movie "Million Dollar Arm" on May 6, 2014 (10 days before the movie release); earlier,
  Robosoft game Dhoom 3 (based on Bollywood movie) had 11 million downloads

- Mohan Reddy founded 20-year old Hyderabad-based IT services company **Infotech Enterpris-
  es** becomes **Cyeint** (combining client, science and InfoTech Enterprises) in May 2014

- **TechMahindra** opens Mexico office in May 2014 and plans to create 500 jobs in the next 24 months

- **HCL Tech** wins 6-year long $ 490 million IT outsourcing (Infra and Applications) contract from-
  Norway's DNB Bank on May 7, 2014, $ 500 million **PepsiCo** deal on May 20, 2014

- **Infosys** hives off products & platforms business into **EdgeServe** on May 12, 2014 (though Finacle
  continues to be part of Infosys Main); gets $ 50 million AT&T contract on May 22, 2014

- Indian e-com major **Flipkart** takes over fashion goods e-Com player **Myntra**on May 23, 2014 in a $ 300 million deal
- **Wipro** gets IT outsourcing contract from glass and specialty materials major**Corning** on a May 23, 2014

MNC companies in India

- SAP announces its decision to offer its software in Hindi and five Indian languages by 2015

People

- M N **Vidyashankar**, IAS (Retd.), former Additional Secretary of Government of Karnataka takes over as **IESA** (Indian Electronics and Semiconductor Association) President on May 5, 2014; with R **Chandrashekar**, IAS (Retd.), former Secretary, Telecom & IT of Government of India taking over as President, **NASSCOM** earlier in the year, the country has amazing people to drive hardware and software businesses in the country

- Vadodara, India born Dr.**Vishal Sikka**, Executive Board Member of the $ 17 Billion IT major from Germany, **SAP**, resigns suddenly on May 5, 2014

- **IBM** CEO **Virgina Mary "Ginni"Rometty** visits Bangalore during May 6-7, 2014

- **Shyam Saran Negi** (97) the first ever voter of Independent India from Himachal Pradesh voted on May 7, 2014, perhaps for the last time

- **Narendra Modi**with his humble beginnings creates history on May 17, 2014 by becoming India's 15th Prime Minister

- **Gujarat** gets its first woman Chief Minister **Anandiben Patel**on May 22, 2014

- **AAP** Leader **Aravind Kejriwal** gets into jail on May 20, 2014 in the defamation case

- **Infosys**President BG **Srinivas** quits on May 28, 2014 and joins PCCW in Hong Kong

Education & Research

- Prof **Manu Prakash** (IIT Kanpur Alum) of Stanford University creates **Foldscope** - a very low cost ($1) microscope - to take science teaching for the masses

- IIT JEE Main entrance examination results out on May 2, 2014

Interesting applications

- Pizza gets air delivered thru **Drone** in Mumbai on May 23, 2014 by Francesco's Pizzeria in Lower Parel to a customer in Worli, just a kilometer away

Interesting numbers

- **Telecom subscriber** base on March 31, 2014 stood at 933.00 million with 904.51 million mobile subscribers and 28.49 million wire-line subscribers (with net addition of 1.15 million mobile subscribers and net reduction of 0.11 million wire-line subscribers in March2014) (TRAI Press Release No. 25/2014 dated May 12, 2014)
- **India's Foreign Exchange on May 30, 2014 was at $ 312.38 billion (RBI)**
- **Indian Rupee** stood at 59.20 against USD on May 31, 2014 (RBI)
- On May 31, 2014 **BSE Sensex** and **NSE NIFTY 50** (Indian stock market indices) were at 24,217 and 7,229 respectively (Reuters)
- **Apple'ssix month revenue crosses$ 100 billion** ($ 103.4 billion) for the first time (Oct 2013 - March 2014), a first for any IT company
- **Gmail App on Android** is the first App to cross **one billion mark** on **GooglePlay Store** on May 16, 2014
- India's low-cost carrier **GoIndigo** wins **Airbus Award** for Worldwide Operational Excellence with best on-time arrivals among 311 Airlines

5

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IT in July 2014

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General

- On July 15, 2014, India joined Brazil, Russia, China and South Africa to create a historic BRICS Bank *(New Development Bank);* the new Institution will be headquartered in China, India will nominate the first President; Brazil will nominate the first Chairman, Board of Directors and Russia will nominate the first Chairman of Board of Governors, and Johannesburg in South Africa will host a Regional Headquarters; all five countries to have an equal share of the capital - $ 50 billion initially, to be raised to $ 100 billion
- Government of India raises FDI cap in Insurance to 49% on July 22, 2014
- World Bank talks of $12-15 Billion loan to India in 2015
- Evacuation of Indians stranded in war-torn Iraq kept Indian government busy much of July 2014; more than 2,500 nurses return in July
- Malaysian Airlines crash kills 295 people on July 18, 2014; Taiwanese Airplane crash kills 47 on July 23, 2014; Algerian plane crash kills 116 people on July 24, 2014

Markets

- The new Government's Budget was presented on 8th & 10th July 2014 (Railway budget and Main budget); pre-budget expectations take stock market index Sensex to 26,000 on July 7, 2014
- India's e-commerce major **Flipkart** raises $ 1 billion; its reported market capital evaluation exceeding $ 6 billion makes front page news
- **Apple** posts record profit of $ 7.7 billion and $37.4 Billion sales in April-June quarter of 2014
- **Google** buys music streaming service **Songza,** that uses music experts to curate content (Playlists) on July 1, 2014
- **Twitter** buys **TapCommerce,** (startup focusing on Advertisement service to target existing base of mobile customers) on July 1, 2014

Products

- Chinese smartphone manufacturer **Xiaomi** launches first handset **Mi 3** in India on Flipkart July 8, 2014; it crashes the website; reportedly sold 100,000 units within 34 minutes of launch!
- **Samsung Galaxy Tab S Tablet** (8" and 10" versions) with LTE support launched in India on July 15, 2014
- On July 16, 2014 Microsoft talks of sub **$ 200 Windows laptop from HP** for 2014 holiday soon
- Indian electronics store major **Croma** launches Intel processor-based **Windows 8.1 Tablets** at □11K and □ 13K price points on July 31, 2014

Indian IT companies

- Indian IT services leader **TC S**posts strongest growth in 3 years;its market capitalization touched □5 Lakh crores ($ 80 billion) in July 2014
- **Flipkart** to add 12,000 people to its 12,000 strong employees and looking for 1.5 million sq. ft. Office space in Bangalore in July 2014
- Mysore-based **Skanray** (2007 founded) acquires Italian X-ray firm CEI Italy on July 17, 2014; with earlier acquisition of medical units division of Coimbatore-based **Pricol** and **L&T**, Skanray is

emerging as major force in medical equipment supply, where India has no place so far

- India's IT services major (4th among Top 10) **Wipro** bags $1.2 B contract from Canadian utility **Atco** for 10 years on July 18, 2014; it also buys its IT subsidiary Atco I-Tek for $195 million
- **Infosys** wins multi-year contract from **Daimler Chrysler** on July 22, 2014

MNC companies in India
- **IBM** signs deal with micro-finance company Janalakshmi for six years (20 million accounts by 2020)
- **Wal-Mart** starts Biz-to-Biz e-Commerce in India in July 2014
- **Apple** and **IBM** join hands to promote iPad adoption in corporate sectorin July 2014
- **Ericsson** opens 4th global data center in Kolkata on July 8, 2014
- **Amazon** to invest $ 2 billion in India as per CEO call on July 30, 2014
- **Intuit** acquires Jaipur-based KDK software (set to be used by "1 out of every 5 accountants" in India) on July 31, 2014

People
- Gen. Suhag with very humble beginning becomes India's 26thArmy Chief on July 31, 2014
- Bank of Baroda CMD SS Mundra takes over as RBI Deputy Governor on July 31, 2014
- Distinguished visitors to India during July 2014 include
- o US Secretary of State John Kerry
- o World Bank PresidentJim Yong Kim
- o Facebook COO Sheryl Sandberg

Education & Research
- Boston University Professor Sushil Vachani takes over as Director, IIM, Bangalore on July 1, 2014
- India-born Prof Sujit Choudhry becomes the Dean of UC Berkeley's LawSchool on July 6, 2014
- Dr.Gopich and Katragadda, Head Research in GE Tech Center in Bangalore set to be Technology Adviser to Cyrus Mistry, Chairman of Tata Sons
- Dr. Nikhil Srivastava of Microsoft Research India wins 2014 George Polya Prize for solving Kadison Singer problem on July 31, 2014

Telecom
- Airtel has 300 million telephone customers by July 31, 2014

Infrastructure
- **Uri II** Power station with 240 MW capacity goes on stream in Kashmir on July 4, 2014; Katragadda-Udampur Railway line that connects Vaishnao Devi temple was inaugurated on July 4, 2014

Interesting applications
- **State Bank** (SBI) launches "**InTouch**" (touch banking) in July 2014
- Punjab and Haryana High Court use VPN to go "paperless" on July 15, 2014, the first to do so in India
- Unusual start-ups **TravelKhana**, **MeraFood** and **TrainKhana** use Apps to deliver food to train passengers in the place of their choice
- Prime Minister launches **MyGov** as a way to connect the citizens with the Government on July 26, 2014
- Bangalore's electric utility **BESCOM** makes bills (including past bills, usage analytics) just a click away from July 31, 2014

Interesting numbers

- **Telecom subscriber** base on May 31, 2014 stood at 938.34 million with 910.16 million mobile subscribers and 28.18 million wire-line subscribers (with net addition of 2.71 million mobile subscribers and net reduction of 0.18 million wire-line subscribers in May 2014) (TRAI Press Release No. 37/2014 dated July 7, 2014)

- **India's Foreign Exchange** on July 31, 2014 was at $ 320.7 billion (RBI)

- **Indian Rupee** stood at 61.18 against USD on August 1, 2014 (RBI)

- On July 31, 2014 **BSE Sensex** and **NSE NIFTY 50** (Indian stock market indices) were at 25,739 and 7,667 respectively (Reuters)

- **TCS** is No 3 globally in headcount; IBM (4,31,212), HP (3,17,500), TCS (300,464), Accenture (280,000), Cognizant (178,000), Fujitsu (168,733), Infosys (169,405) are Top Tech employers as of June 2014; Coal India (357,926), BSNL (244,891), SBI (223,000) are the other big employers

- **E-Commerce companies** in India to hire 60,000 professionals in 2014

- **Microsoft** announces 18,000 job cuts across the globe; small-size cuts in India too

- **Twitter** buzz reached 672 million during World Cup (12th June to 13th July, 2014)

- **Flipkart** turnover touches $ 1 billion by March 2014, raises $ 1 billion by July 2014 and valuation reach $ 5 billion!

- **NASSCOM** talks of 1.8 Lakhs job creation in 2014-15 by the $ 107 billion Indian IT industry that employs 3.1 million currently

- **TCS** has a market capitalization of □ 5 Lakhs Crores ($ 84 billion) compared to Infosys (1.9), Wipro (1.4), HCL (1.1) in Tech Industry and ONGC (3.5), Reliance (3.3), ITC (2.8) and Coal India (2.4)

- **Airtel** has 300 million telephone customers by July 31, 2014 (100 million in 2009, 200 million in 2012, started in 1995)

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These are his personal views.

Words of Wisdom

Before you can learn a new way of doing things,
you have to unlearn the old way. So beginnings depend on endings.
– Rick Maurer

* * * * *

We must remember that one determined person can make a significant difference,
and that a small group of determined people can change the course of history.
– Sonia Johnson

* * * * *

The purpose of life, after all, is to live it, to taste experience to the utmost,
to reach out eagerly and without fear for newer and richer experience."
– Eleanor Roosevelt

7

IT in August 2014

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General

- **Planning Commission**, the supreme decision-making body for six decades, goes into history on August 15, 2014

- Prime Minister dedicates guided missile vehicle of the Indian Navy **INS Kolkata** to the Nation on August 16, 2014

- On August 28, 2014 Prime Minister launched the new financial inclusion drive **Jan Dhan Yojana**- that attempts to provide bank accounts to 75 millionpoor families, who still do not have a bank account;on the very first day 15 million bank accounts were opened! State Bank opened 2 million accounts. The Government plans to have RuPay debit card and Rs 30,000 Life Insurance built into this "zero minimum balance" account that will be used for direct benefit transfer

- In **Commonwealth Games** held in Glasgow during July 23 - August 3, 2014, India finished at the 5th position (among the 7 Nations) with 64 medals, next only to England, Australia, Canada and Scotland

- India takes a tough stand in World Trade Organization (**WTO)** talks in Bali that concluded on July 31, 2014 but agrees to re-engage on August 1, 2014

- Asian Development Bank (**ADB**) agrees to give up to $ 9 billion loan to India over three years

- *Lok Sabha*(Indian Parliament) passes **Judges Appointments Bill** on August 13, 2014

- **Chennai** celebrates 375th Foundation Day on August 21, 2014

- **Yoga Guru BKS Iyengar**– who managed to take Yoga to millions across the planet - passed away at the ripe age of 95 after a brief illness on August 20, 2014; **Richard Attenborough** who directed the film **Gandhi** – award-winning critically acclaimed film that had a profound impact on millions - passed away at the ripe age of 90 on August 25, 2014

Technology

- On July 31, 2014, Danish scientists at Technical University, Denmark achieved a new record in communication -**43 Terabits/second speed** (5.5 Terabytes/second or transmitting the entire contents of 1 TB hard disk in one-fifth of a second), using single fiber specially made by NTT, Japan

Markets

- Indian currency takes the steepest fall (in six months) of 68 paisa in a day to 61.18 against USD on August 1, 2014

- **HP** is back to No 1 position in the Indian PC marketwith 29.5% market share (according to IDC) based on April - June 2014 sales data

- **Apple** stock price crossed $ 100 on August 20, 2014 (after seven-for-one stock split in July 2014)

- **HDFC Bank** is the most valued brand in India, as per the first-ever BrandZ exercise in India announced on August 20, 2014

- **Amazon** buys Video gaming company **Twitch** (that enables video gamers to allow others to watch the

game online) for $ 970 million on August 26, 2014

Products

- **Microsoft** launches the most affordable **Lumia 530 phone** at Rs 7,000in India on August 13, 2014

- **Amazon** Point-of-Sale (PoS) terminal **Local Register** launched in USA on August 13, 2014, that would compete with the likes of **Square**, and allow smart-phones and Tablets to become a PoS

- Indian mobile handset brand **Intex Technologies** introduces open-source Mozilla-based smartphone **Cloud FX** at Rs 1,199 on August 25, 2014

- **Flipkart** launched five Intel processor-based W**DigiFlip ProTablets** in ☐ 5,999 to 15,999 price range on August 26, 2014 (on the heels of launching the first-ever Tablet launch by Indian e-Commerce major in July 2014)

- **Alcatel** launches **OneTouch** smart phones in India and expects to sell 500,000 units in 2014

Indian IT companies

- **HLL**, **TCS, L&T, Sun Pharma**, **Bajaj Auto** in the **Top 100 World's Most Innovative companies** (Forbes 2014)

- Indian handset major **Micromax** is selling more mobile phones in India today than Korean big-wig Samsung as per August 2014 data!

- Bangalore-based Analytics start-up **MuSigma** (founded by Dhiraj Rajaram) set to join the India-based companies in Billion Dollar club soon; its market value set to cross $ 5 billion in August 2014

- Indian e-commerce company **Snapdeal** touches $ 1 billion mark in 2.5 years in August 2014 (a year ahead of the original plan)

- Tata SIA Airline "**Vistara**" takes off on August 11, 2014

- NOIDA (Delhi) based e-waste company **Attero** gets 100 Crores funding in August 2014

MNC companies in India

- Made in India product**,** co-created by **SAP Labs India** with Tata Memorial Hospital in Mumbai"**Project Genomics**" with visualization and analytics tools for bio-informatics sector goes global in August 2014

- **Microsoft** decides to set up DataCenter in India in August 2014

- **Honeywell** plans to invest Rs 1,400 crores in its second campus in Bangalore

- **Mercedes Benz** India R &D Centre to have 50 data scientists soon

- Chinese handset major **Xiaomi** planning R & D unit in Bangalore

People

- **Arun Murthy** (key contributor to **Hadoop**), **Surabhi Gupta** (key contributions to search engine **Airbnb**), **Swatee Singh** (contributor for to **American Express "My offers"**), **Vijay Subramanian** (key contributions to **Rent the runway**) – are four Indians the global list of 20, a maiden attempt by **Fortune** Magazine to chronicle the leaders in **Big Data / Analytics**

- **Infosys** new CEO **Dr. Vishal Sikka** starts his innings on August 1, 2014

- **Prime Minister Modi** visits Nepal during August 3-4, 2014

- **Dilip Khandelwal** takes charge as **SAP Labs India Managing Director** on August 5, 2014

- **Steve Ballmer** steps done from **Microsoft Board** in August 20, 2014

5

- **Yoga Guru BKS Iyengar**– who managed to take Yoga to millions across the planet - passed away at the ripe age of 95 after a brief illness on August 20, 2014
- **Richard Attenborough** who directed the film **Gandhi** – award-winning critically acclaimed film that had a profound impact on millions - passed away at the ripe age of 90 on August 25, 2014

Education & Research

- Professor **Manjul Bhargava** of Princeton University wins **Fields Medal**(highest honour given to young mathematicians less than 40 years old) on August 13, 2014 for contributing "powerful new methods in the geometry of numbers"; Professor **Subhash Khot**in the Computer Science Department of New York University's Courant Institute of Mathematical Sciences) wins **Rolf Nevenlinna Prize** for outstanding contributions to mathematical aspects of Information Sciences including Computer Science; both the wineers are Persons of Indian origin
- **Tatas** give 95 crores to **IIT Bombay Design Center** in August 2014

Infrastructure

- Prime Minister dedicates 765 KV Solapur Raichur transmission line on August 16, 2014
- **Mumbai Metro** (Colaba - Bandra - Andheri line) sees ground breaking ceremony on August 26, 2014
- Government talks of 10,000 MW of **wind energy** every year for the next five years

Interesting applications

- **Mobile banking** sees increased traction; ICICI Bank alone posts ☐2645 crores worth transactions in April – June quarter (compared to ☐ 5,741 crores transactions in the whole of the year 2012-13)
- **OlaCabs** taxi hailing **App** tweaks the process and gets average waiting time to 10 minutes!
- Government okays ☐1,00,000 crores **Digital India project** in August 2014; SIM card to be linked to AADHAR as part of this project
- Several telcos start offering SMS-based basic banking services in India using USSD; Prime Minister launches this as part of the larger financial inclusion initiative **Jan Dhan Yojana**

Interesting numbers

- **Telecom subscriber** base on June 30, 2014 stood at 942.95 million with 914.92 million mobile subscribers and 28.03 million wire-line subscribers (with net addition of 4.77 million mobile subscribers and net reduction of 0.16 million wire-line subscribers in June2014) (TRAI Press Release No. 53/2014 dated August 20, 2014)
- **India's Foreign Exchange** on August 22, 2014 was at $ 318.6 billion (RBI)
- **Indian Rupee** stood at 60.58 against USD on August 29, 2014 (RBI)
- On Aug 29, 2014 **BSE Sensex** and **NSE NIFTY 50** (Indian stock market indices) were at 26,638 and 7,954 respectively (Reuters)
- Government talks of 10,000 MW of wind energy every year for the next five years
- **Flipkart** creates 400 crorepatis among employees, thanks to Employees Stock Options
- Half of **TrueCaller's** 70 million subscribers are in India
- **WhatsApp** active user base crosses 600 million in August 2014!
- **Average speed on Bangalore** roads drop from 35 Kmph in 2005 to 20 Kmph in 2010 and to 9 Kmph in 2014!

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IT in September 2014

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General

- Indian Prime Minister Modi had a very successful visits to Japan and USA and hosted the Chinese Premier in India – all in September 2014; his US visit gets rock star welcome with 20,000 representatives of the 3.2 million strong Indian diaspora (from 186 organizations across 48 States and 5 Canadian provinces) attending a gala function in Times Square Garden on September 27, 2014

- Japan commits $35 billion investment over 5 years in India during PM Modi visit to Japan in September 2014

- China allows short route to *Manas Sarovar* (soon after Chinese President visit) in September 2014

- Prime Minister launches "Make in India" and "Clean India" Campaign on September 24, 2014

- Supreme Court cancels all 204 coal block allocation on September 24, 2014, causing major hurdles for the Indian power sector

- Kashmir flood causes havoc in September 2014

- Afghanistan sees change of guard with Ashraf Ghani taking over from President Hamid Karzai on September 26, 2014

- Scotland decides (through referendum) to stay with United Kingdom on September 19, 2014

Science & Technology

- India's maiden Mars Mission successful with Mars Orbiter Mission (MOM) on to perfect position on September 24, 2014 at 7:52 AM IST; India is the fourth country, and the first to succeed in the very first attempt on Mars Mission; MOM provided a huge moral boost to the Science & Technology community in India

Markets

- Indian stock market index **Sensex** touches 27,000 on September 2, 2014 as Modi Government completes 100 days in office

- **Cognizant** acquires **TriZetto**, a US-based healthcare company for $ 2.7 billion on September 15, 2014

- **Microsoft** buys mobile gaming company **Minecraft** for $2.5 billion on September 17, 2014

- Global market research major **Nielsen** buys **Indicus Analytics** (India's premier economic research and analytics company founded in December 2000) on September 18, 2014

- **Firstsource** (BPM major) buys **Nanobi**, an analytics product startup company (HSR Layout, Bangalore) on September 18, 2014

- **SAP** buys **Concur** (founded by Sudhir Steven Singh in 1993) – a cloud-based travel and expenses management company - for $ 7.3 billion on September 19, 2014

- Chinese e-commerce major **Alibaba** goes for phenomenally successful IPO ($21,8 Billion) on

September 22, 2014; its market capitalization ($ 231 billion) exceededthat of **Amazon** ($ 153 billion) and **eBay** ($ 65 billion) combined on September 20, 2014

- Bangalore-based startup **BookPad** gets acquired for ⬚ 50 Crores by Ya**h**o**o** on September 21, 2014
- **IndiGo Airlines** signs $2.6 billion financing deal with Chinese bank ICBC to buy more than 30 planes

Products

- **Samsung** launches **Galaxy Note 4** in Berlin on September 3, 2014
- **Microsoft** launches **Nokia730**, **Nokia735** and **Nokia830** phones in Berlin on September 4, 2014
- **Apple** launches **iPhone 6** and **iPhone6 Plus** (improved iPhone versions),**Apple Watch** (a new category) and **Apple Pay**(a new online payment service) on September 9, 2014
- **Google** SVP Sundar Pichai launches**Android One** phones in India (smartphones in ⬚ 6000 Price range) on September 15, 2014
- **Blackberry** launches square-screened **Blackberry Passport** mobile phone on September 24, 2014
- **Moto X**(2nd Generation) introduced in India by Motorola at price of ⬚31,9999 on Sep 24, 2014
- **Amazon** launches **Fire 7.9**" Tablets in September 28, 2014
- **AppleiPad Classic** gets a quiet burial in September 2014

Indian IT companies

- **TCS**(India's No 1 IT Services company) women employees' headcount crosses 100,000 in September 2014
- **Infosys**(India's No 3 IT Services company) ties up with **Microsoft,Hitachi** and **Huawei** in September 2014; wins contract with **British Petroleum** in September 2014
- **Wipro** (India's No 4 IT Services company) wins $35 million order from **Philip Morris** in September 2014
- **Tech MahindraCognizant**(India's No 5 IT Services company) bags multimillion dollar projects with **Ahlstorm**($ 1 Billion strong Finnish materials company) in September 2014
- **HCL Tech**(India's No 6 IT Services company) bags **Sydney Trains** order in September 2014;set to recruit 1,200 in USA in 2014 and invests $ 9 million in North Carolina Center
- **Cognizant**(India's No 2 IT Services company) announces the acquisition of **TriZetto**, a U.S.-based healthcare company for $ 2.7 billion on September 15, 2014
- Global market research major **Nielsen** buys**Indicus Analytics**(India's premier economic research and analytics company founded in December 2000) on September 18, 2014
- **Firstsource** (BPM major) buys **Nanobi**, an analytics product startup company (HSR Layout, Bangalore) on September 18, 2014
- Bangalore-based startup **BookPad** gets acquired for ⬚ 50 Crores by **Yahoo** on September 21, 2014

MNC companies in India

- **Goldman Sachs** to build $ 200 million campus in Bangalore and to increase headcount to 9,000 from current 5,400

People

- N **Chandrasekaran** re-appointed **CEO of TCS** for another five years (October 6, 2014 to October 5, 2019)

- **Kris Gopalakrishnan**(Infosys Co-Founder) joins **IAN** (Indian Angel Network) on September 24, 2014
- **Oracle** founder **Larry Ellison** decides to step down as CEO on September 19, 2014 after 37 years
- **Amazon** CEO **Jeff Bezos** visits India in September 2014, invests $ 2 billion, drives in the Indian lorry, talks of 11,500 merchants selling 17 million products already on Amazon India
- **Google** EVP **Sundar Pichai** launches **Android One** globally from India on September 15, 2014
- **Microsoft** Founder **Bill Gates** visits India and pledges support for Kashmir rehabilitation
- **Chinese Premier Xi** visits India during September 16-18, 2014
- **Australian PM** visits India in September 2014
- **Richard Verma** (born to Indian migrant) named **US Ambassador** to India on September 18, 2014
- **General Motors** CEO **Mary Barra** visits India in September 2014
- **Justice HL Duttu** becomes India's **16ᵗʰChief Justice of India** on September 26, 2014

Education & Research

- **Nalanda university** opens after eight centuries on September 1, 2014
- Prime Minister **Modi** creates history by speaking to millions of high-school students on **Teachers Day** (September 5, 2014)
- **Bhatnagar Awards** for 2014 announced on September 26, 2014; Dr. **Roop Mallik** of **TIFR**, Bombay (Biological Sciences), Dr.**K R Prasad** of **Indian Institute of Science** and Dr.**Souvik Maiti** of **Institute of Genomics**, Delhi (Chemical Sciences), Dr. **S N Tripathi** of **IIT Kanpur** (Earth, Atmosphere, Ocean and Planetary Sciences), Dr. **Venkata Mohan** of **IICT**, Hyderabad and Dr. **Soumen Chakrabarti** of **IIT Bombay** (Engineering Sciences), Dr. **K K Verma** of **Indian Institute of Science**, Bangalore (Mathematical Sciences), Dr. **Anurag Agarwal** of **Institute of Genomics**, Delhi (Medical Sciences) and Dr. **Pratap Raychaudhuri** of **TIFR**, Bombay and Dr. **Sadiquali Abbas Rangwala** of **Raman Research Institute**, Bangalore (Physical Sciences) are the winners

Telecom

- **Vodafone** launches **3G Mobile Wi-Fi**(Rs. 5,500) in India on September 3, 2014

Infrastructure

- Vijayawada will be the new Andhra Pradesh capital as per September decision

Interesting applications

- **Jan Dhan Yojana** (mega "inclusive banking" initiative) started on August 29, 2014 gets 15 million new accounts on Day 1; 40 million by September 15, 2014
- **Employees Provident Fund Organization** (EPFO) launches UAN Services in September 19, 2014, to provide seamless online access to millions of employees for their account (across employers)
- **Five new schemes** get **AADHAR**- UID (Universal ID) **authentication** - push by Government of India on September 20, 2014
- Income tax department launches a new user friendly web site www.Incometaxindia.gov.in on September 21, 2014
- **All India Radio** (AIR) launches SMS based News service in Hindi, Marathi, Sanskrit, Dogri and Nepali on September 23, 2014

- **Google Maps** launches navigation instructions in Hindi from September 2014
- **Indian Railways** introduces SMS-based "wake up" call service
- www.Schoolreportcards.inis the App that provides instant information about 1.5 million schools in India, thanks to NUEPA (National University of Educational Planning and Administration)
- **Ola Cabs App** Wallet introduced in September 2014
- Mysore city sees **Taxi Apps** making a difference to the huge tourist population during *Dasara* season

Interesting numbers

- **Telecom subscriber** base on July 31, 2014 stood at 946.40 million with 918.72 million mobile subscribers and 27.68 million wire-line subscribers (with net addition of 3.80 million mobile subscribers and net reduction of 0.35 million wire-line subscribers in July2014) (TRAI Press Release No. 61/2014 dated September 10, 2014)
- **India's Foreign Exchange** on September 26, 2014 was at $ 314.2 billion (RBI)
- **Indian Rupee** stood at 61.76 against USD on September 30, 2014 (RBI)
- On September 30, 2014 **BSE Sensex** and **NSE NIFTY 50** (Indian stock market indices) were at 26,665 and 7,954 respectively (Reuters)
- **Apple** sells mores than **10 million new phones** (iPhone 6 and 6 Plus) during the launch weekend (September 19-21, 2014)
- **Firefox** powered low cost smart phone priced at amazingly low □ 1,999 Cloud FX by **Intex** sells 15,000 in 3 days (Aug30, 2014)
- **TCS** market capitalization reaches □ **5 Lakh Crores** again on September 3, 2014
- **India** consumes **301 million smartphones** during April - June 2014 (IDC)
- On September 9, 2014 **Indian stock markets** hit new peak;**M-cap reaches $ 1.6 trillion!**
- **BigBasket** crosses 1 million orders and 25 million items in September 2014

Words of Wisdom

The whole problem with the world is that fools and fanatics are always so certain of themselves, but wiser men so full of doubts.

– Bertrand Russell

* * * * *

The deepest secret is that life is not a process of discovery, but a process of creation. You are not discovering yourself, but creating yourself anew. Seek therefore, not to find out Who You Are, but seek to determine Who You Want to Be.

– Neale Donald Walsch

7

IT in October 2014

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General

- In <u>economic news</u>, India set to become $ 2 trillion economy this year; Government bites the bullet - **Diesel pricing** is freed - moves to market pricing on October 19, 2014; **FDI in realty sector** opened up in October 2014; India joins 20 Asian countries to launch **Asia Infrastructure Investment Bank** on October 24, 2014; India clears ☐ 80,000 crores defence deals on October 27, 2014; Coal Reform announced on Oct 30, 2014; Crude oil prices globally slip below $ 93 in early October, helping India (that depends heavily on imported crude) significantly in trade balance; Japan's **Softbank** invests $ 10 billion in India in October 2014

- In <u>political news</u>,BJP shows **impressive victory in Haryana and Maharashtra Elections** (results announced on October 19, 2014); **Haryana, Maharashtra get new Chief Ministers** on October 27, 2014; Election Commission announces **polls in J&K and Jharkhand in November** - December with results to be announced on December 25, 2014; Prime Minister's "**Swachch Bharat**" (Clean India) Missionwas launched on October 2, 2014; hopes to improve cleanliness across the country in the next five years;Prime Minister launches **model village scheme** where every MP will be funded to help create 5 model villages over the next 5 years on October 12, 2014; launches **ShramevaJayate** program of **Labour Reform**on October 16, 2014 and EPFO UAN Scheme that allows workers to take their Provident Fund savings with them when they shift jobs;Prime Minister creates history by **celebrating Diwali with the Jawans** in Siachen border on October 23, 2014; Sardar Patel birthday celebrated across the Nation as **National Integration Day** on October 31, 2014

- **Stampede in Patna** (Gandhi Maidan) kills 33 people on October 4, 2014; **Cyclone *HudHud*** causes extensive damage to coastal towns in Andhra Pradesh and Orissa on October 12, 2014; disaster management teams did a wonderful job with minimal loss of life; **Canadian Parliament shooting** accident claims a life on October 23, 2014; **Ebola** threat increases further in October 2014; **Hong King violence** continues in October 2014

Technology

- Samsung talks of a new 60 GHz technology for high speed Wi-Fi on October 12, 2014

- The much talked about Sapphire for display for smartphones fizzles out as Apple supplier GT shuts door in October 2014

- Bionic eye successful on October 13, 2014

- ISRO successfully launches 3rd navigation satellite on October 16, 2014 (major step in its 7-satellite GPS alternative)

- Japan rolls out its new passenger aircraft on October 19, 2014

- Government sets up IP think tank in October 2014

- NASA unmanned rocket that was to supply International Space Shuttle (ISS) exploded within 6 seconds of launch on October 29, 2014

Markets

- **Amazon** launches huge "**sale**" during October 4-6, 2014; **Flipkart** talks of "**Big Billion Day**" **sale** on October 6, 2014; sells ☐ 600 crores ($100 million) within a day! There were some pricing, technology glitches and fulfillment problems too!!

- **Facebook** completes $ 19 billion acquisition of **WhatsApp** on October 6, 2014

- **Cognizant** acquires Digital Marketing company **Cadient** for $ 30 million on October 6, 2014

- **TrueCaller** with maximum customers in India get $ 60 million funding in October 8, 2014

- Wipro founder **Azim Premji** buys into Chennai-based **FSS** (Financial Software & Systems) that has been running ATM switches, for ☐ 350 crores on October 12, 2014

- *Muhurt* trading on Day 1 of Samvat 2071 (Start of new Calendar for the Indian trading community on Diwali Day) saw NSE going past 8,000 on October 23, 2014

- UK-based **New Telecom** buys **Nimbuzz** (VikasSaxena founded Messenger service and VoIP Service out of India with 200 million users) for $ 250 million on October 27, 2014

- **Softbank** invests $ 10 billion in India with **OlaCabs** and **SnapDeal** getting funded in October 2014

- **Lenovo** completes purchase of **Motorola mobile** division from Google in October 2014

Products

- **Microsoft** announces the launch (in 2015) of next generation **Windows 10** for mobile, Tablet and PC (possibly a free update) on October 1, 2014

- **Microsoft** launches **NokiaLumia**730, 830 and 930 in India priced ☐ 15,299, ☐28,799 and ☐ 38,699 respectively on October 1, 2013 in India

- **AppleiPhone 6** and **6 Plus** launched in India on October 17, 2014; pre-booking starts on October 7, 2014; priced at same level as iPhone 5S; launches **iPad Mini 3**, **iPad Air 2** and **5K iMac**with superior resolution

- **OnePlus** from China ready to launch low cost smartphone (around $ 200) in October 2014

- **Samsung** launches **Galaxy 4G** and **Galaxy Alpha** in India in October 2014

- **Google** launches **Android 5.0** (Lollipop) and new **Nexus Phones** and **Tablets** on October 15, 2014

- **Apple** launches new**OS X**for **Mac (Yosemite)** for free download from October 17, 2014

- **Apple Pay** goes on stream on October 20, 2014

- **Philips** launches Senior Citizen's Phone priced at ☐ 3,800 on October 20, 2014

- **Apple** iOS 8.1 ready for free download on October 21, 2014

- **Google** starts "Invitation only" **Inbox** as a better alternative to Gmail on October 23, 2014 (tenth anniversary of Gmail)

- **Samsung** debuts **Nook tablet** on October 23, 2014

- **Microsoft** Devices launch **Nokia 130** for ☐ 1,649 on October 27, 2014

- **Microsoft** launches fitness device "**Microsoft Band**" for $ 199 on October 30, 2014

5

Indian IT companies

- **TCS, Infosys** post good results for July - September 2014 quarter

- **Flipkart** manages to sell □ 600 crores worth sales on their e-Com site within 10 hours on October 6, 2014 though such an effort leads to problems for consumers forcing the founders (Bansal brothers) to write an Apology letter to Lakhs of customers!

- **Flipkart** has Alexa traffic ranking of 7 in October 2014 with 26 million registered users, 14,000 strong, 20 million products, 6 million visits per day, 5 million shipments per month in 300 cities in India of 20 million products in 70 categories!

- VinayAgarwal's **Unicel** delivers 50 million SMS every day on behalf of its clients (IBM, Flipkart and HDFC Bank) and targets □ 85 Crores in FY 2015

- With expected SoftBank investment of $ 200 million **OlaCabs** is a billion dollars baby (market capitalization) and has 33,000 taxis signed up in 18 cities in India;talks of presence in 100 cities by March 2016

- Udupi-based RohitBhat founded **Robosoft's Camera 4 App** in Apple "**featured App**" in October 2014

- Goonjan Mall founded **Online Prasad** set to expand to 100 temple network in 2015, a concept unique to India

- **Indigo Air** orders 250 Airbus A 320 planes in October 2014, a record in recent aviation history

- **Flipkart** signs up 3 million square feet space at □ 300 crores per year in October 2014

- **HearingPlus**, a startup that sells hearing aids has 70 clinics in 3 years; manages 100% growth for 3 years

- **Wipro** plans 10,000-strong **Open Source team**

- Bangalore-based startup **iViz** got acquired by US company **Cigital** on October 30, 2014

MNC companies in India

- HP splits into two **HP Enterprise** (Software services) and **HP Inc**. (PC, Printer division) on October 6, 2014

- UK telecom major **Vodafone** wins □ 3,200 crores tax dispute on October 10, 2014

- **Google** puts a Doodle on **Mars Orbiter Mission**(MOM) on October 29, 2014 (30 days of MoM)

- **IBM** that used to be No 2 in headcount among IT Services company is not growing in India

- **Yahoo** India cuts 300 jobs in Bangalore and moves develops back to USA in October 2014

- **Nokia** plant in *Sriperumbudur* in Chennai (iconic large plant from the global major of yesterday with capacity to produce 500,000 handsets a day) shuts down on October 31, 2014

Education & Research

- **Nobel Prize for Medicine** goes to John O'Keefe (USA) and May-Britt Moser and Edvard Moser ((Norwegian) (announced on October 6, 2014)

- **Nobel Prize for Physics** goes to Japanese trio Isamu Akasaki, Hiroshi Amano and Shuji Nakamura for their invention of Blue LED announced on October 7, 2014)

- **Nobel Prize for Chemistry** goes to American and German scientists Eric Betzig of Howard Medical Institute and William Moerner of Stanford University in USA and Stefan Hell of Max Planck Germany for their invention of super microscope (announced on October 8, 2014)

- **Nobel Prize for Literature** goes to French author Patrick Modiano (announced on October 9, 2014)

- **Nobel Peace Prize** goes to Indian activist Kailash Satyarti and Pakistan child activist Mala (announced on October 10, 2014)

- **Nobel Prize in Economics** goes to French economist Jean Tirole (announced on October 12, 2014)

- **PhD students get increased stipend of □ 25,000**(from current□ 16,000)effective from October 2014

- **Ben Nelson** launches **Minerva Project** (online-based College education that follows new model) in October 2014 targeting Indian students

People

- **Amazon CEO** Jeff Bezos visits India on October 1, 2014

- **Infosys Finacle head** Haragopal quits on October 1, 2014

- **TCS former CEO** (1996 - 2009) S Ramadorai retires from Tata Sons on October 6, 2014

- **Facebook CEO** visits India and meets Prime Minister Modi on October 8, 2014

- **Infosys cofounders all log out** of Infosys on October 8, 2914 with Kris Gopalakrishnan stepping down; NR Narayana Murthy, Nandan Nilekani, Shibulal, NS Raghavan and Dinesh stepped down earlier; it was a historic milestone in the history of Indian industry where there was smooth transition from founders to professional management after 33 years history with the company's market capitalization moving from □ 28.5 Crores on the day of listing on 1993 to □ 2,00,000 crores in 2014 with annual business of $ 8 billion in 2013-14

- Four Indians in "**Fortune October 2014 list of 40 of under 40**"

- Arvind Subramanian is the new **Chief Economic Advisor** for the Indian government (appointed on October 16, 2014)

- **President Pranab Mukherjee** visits Santa Claus official home in Arctic Circle on October 16, 2014

- **India-born Mexican scientist Sajaya Rajaram** wins **World Food Prize 2014** for contributions to record wheat production

- **Alan Eustace**, Google executive jumped from altitude of 1,35,890 feet (edge of space) and descended in 15 minutes at peak speed of 822 miles per hour on October 25, 2014, setting the world record for free fall jump; the balloon used in the feat was manufactured by TIFR Balloon facility in Hyderabad!

- Vietnam Prime Minister, SoftBank CEO and IEEE President visit India in October 2014

- India remembers **Sardar Valabhbhai Patel** on his birthday by way of celebrating it as National Integration Day on October 31, 2014

Infrastructure

- India helps Sri Lanka rebuild **Colombo Jaffna Rail link,** 339 KM long link, with $ 800 million credit and 4,000 people working for four years and executed through IRCON (Indian Railway Subsidiary); the link was opened on October 13, 2014 (closed in 1990)

- The **world's largest terry towel plant** by **Trident** Group in Budni, Madhya Pradesh inaugurated by Chief Minister Shivraj SinghChouhan on October 7, 2014

- **Saint-Gobain** inaugurates one of the largest float glass complex with 1000 tons per day capacity at Bhiwadi, Rajasthan on October 27, 2014

- **L & T** Bags □ 2,979 crore order for building "Statue of Unity" in Gujarat on October 27, 2014

- **Sun Edison** bags 150 MW solar power plant order from Government of Karnataka in October 2014

Telecom

- **Skype** to discontinue calls to phone lines in India from November

Interesting Applications

- NPCI (National Payment Corporation of India) launches **NUUP** (National Unified USSD Platform) for mobile payments across India (it works on any mobile phone including feature phones) in October 2014

- Bangalore **Namma Metro** announces top up through mobile in October 2014

- **IRCTC** App on Android launched on October 12, 2014

- **AADHAR** to become eKYC, paving the way for widespread use (as per October 16, 2014 (Home ministry decision)

- **Apple Pay** (contact less credit / debit card payment system that uses NFC (Near Field Communication) goes on stream on October 20, 2014

- **Corporation Bank** launches e-Mandate service in October 2014

- Government of India to announce **eVisa** by October end

- Amazon, Flipkart and Jet Airways tie up with **RuPay card** on October 23, 2014

- **State Bank** launches mPassbook on October 23, 2014

- **Electronic Toll collection FASTag**starts on Delhi Mumbai corridor on October 31, 2014

Interesting numbers

- **Telecom subscriber** base on August31, 2014 stood at 951.84 million with 924.32 million mobile subscribers and 27.52 million wire-line subscribers (with net addition of 5.60 million mobile subscribers and net reduction of 0.16 million wire-line subscribers in August2014) (TRAI Press Release No. 66/2014 dated October 14, 2014)

- **India's Foreign Exchange** on October 31, 2014 was at $ 315.9 billion (RBI)

- **Indian Rupee** stood at 61.44 against USD on October 31, 2014 (RBI)

- On October 31, 2014 **BSE Sensex** and **NSE NIFTY 50** (Indian stock market indices) were at 27,894 and 8,300 respectively (Reuters)

- World has **more mobile phones than people** (7.19 billion as the tipping point) in October 2014

- The **Top 3 global brands** today are **Apple** ($ 118 billion), **Google** ($ 107 billion) and Coca Cola ($ 81 billion) as per Interbrand, UK

- **Apple India** revenue jumps from ☐450 Crores in 2010 to ☐ **4500 crores in 2014**;**GoogleAd revenue** in India set to cross**$ 1 billion** in 2014!

- With $ 511 million profit (33% increase) and $ 2,201 million revenues for June - September quarter **Infosys** pleasantly surprises the market when Vishal Sikka announced the results for the first time in October 10, 2014

- **TCS** to hire 35,000 in 2014-15, Infosys to hire 15,000 in 2014-15

- India improves its position from 63 to 55 in the global hunger index

- **Petrol is ☐ 1 cheaper** from October 13, 2014 thanks to falling crude oil prices globally ($83 on October 16, 2014)

- Indian government launches **3,000 MW Solar power** norms on October 16, 2014

- **TTD** feeds 5,00,000 devotees in Tirumala during Garuda Seva on October1, 2014 with free food!

- **India** has over **6,00,000 taxis in Top 10** cities with 35,000 Radio Cabs and 30,000 with taxi aggregators (Apps based services like Uber, Ola and TaxiForSure)

Words of Wisdom

Still round the corner there may wait,

a new road or a secret gate.

– J. R. R. Tolkien

* * * * * * * * * * * *

Happiness is not the absence of problems,

it's the ability to deal with them.

– Steve Maraboli

* * * * * * * * * * * *

Try to make at least one person happy every day. If you

cannot do a kind deed, speak a kind word. If you cannot

speak a kind word, think a kind thought.

– Lawrence G. Lovasik

* * * * * * * * * * * *

Great things are not accomplished by

those who yield to trends and fads and popular opinion.

– Jack Kerouac

9

Vol. 9   No. 9

December 2014

IT in November 2014

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General

- **Mangalyaan** (India's Mars mission) on 2014 list of Top 25 inventions of 2014 as per **Time** Magazine

- Wholesale **inflation** drops to 1.77% (5-year low) on November 14, 2014; stock markets see a boom in November 2014

- **Prime Minister Modi** completes 5-Nation visit; attends SAARC meet in Nepal during November 25-27, 2014; convinces **President Obama** to accept his invitation to be the Chief a Guest during Republic Day (January 26, 2015); expands Union Cabinet with 21 new Ministers on November 9, 2014 including IIT-Bombay educated Goa Chief Minister Manohar Parrikar

- Kerala & Goa reach 100% coverage of **bank accounts for all** by November 19, 2014

- Bangalore **IT.Biz** (India's premier event that was started in 1998) was held in Bangalore during November 12-14, 2014; for the first time the global event **CeBit** partnered with IT.biz

- Bangalore becomes **Bengaluru** on November 1, 2014

- Haryana Maharashtra get **new BJP Governments** in November 2014; Fadnavis is the new Maharashtra CM; Goa gets a new CM

- **Elections** in Jammu & Kashmir and Jharkhand start on November 25, 2014

- **World Trade Center in New York City**, that was destroyed on September 11, 2001 rebuilt at a cost of $ 3.9 billion was inaugurated on November 3, 2014; it is 541 meters tall today

- World celebrates the 25th year of the fall of Berlin Wall on November 9, 2014

- Japan slides into recession in November 2014; new Elections announced

- Jindal steel puts off $ 10 billion investment in Orissa (due to coal block license cancellation)

- Wagah border blast on November 2, 2014 kills 55; man-made disaster leads to nine sterilization deaths in Chhattisgarh on November 11, 2014; suicide bomber in Afghanistan kills 45 people on November 23, 2014

Technology

- **Mangalyaan** (India's Mars mission) on 2014 list of Top 25 inventions of 2014 as per **Time** Magazine

- India-born Rajesh Rao of University of Washington demonstrates brain-to-brain interface over Internet (according to November 5, 2014 PLOSOne article)

Markets

- **Sensex** (Indian stock market index) crosses **28,000** on November 5, 2014 for the first time; Bombay Stock Exchange (BSE) market capitalization touched □ 1 Lakh Crores on November 28, 2014

5

- November 2014 saw **Apple** market capitalization going past **$ 700 billion** and **Microsoft** moving to **No 2** position in market value (next only to Apple and ahead of Coca Cola and Exxon)
- **Yahoo** buys **Brightroll** for $ 640 million on November 12, 2014
- Bangalore-based **Quest** Global acquires Trivandrum-based **NeSt** Software on November 4, 2014
- Mysore-based **Raman Fibre Science** (founded by Aroon Raman) gets acquired by US-based Hollingsworth &Vose on November 6, 2014
- **Kotak Mahindrabank** buys **ING VysyaBank** on November 20, 2014
- **Tech Mahindra** buys US-based networking company **Lightbridge Communications** for $ 240 million on November 20, 2014
- **Future** group buys 300-year old retailer **Nilgiris** for ▢ 300 crores on November 21, 2014

Products

- **Google** launches **Inbox** (invitation only at this time) in November 2014
- **Microsoft** offers **free** mobile versions of MS **Word**, **Excel** and **PowerPoint** for **iPhone** and **iPad** on November 6, 2014; also launches **Microsoft Lumia 535** (first non-Nokia branded Lumia) globally for € 110 on November 11, 2014; its India launch was on November 26, 2014 at a price of Rs 9,199
- **Amazon** announces voice controlled speaker Amazon **Echo** on November 8, 2014
- **Alcatel** launches **OneTouch** Flash phone for ▢ 9,999 in India on November 20, 2014
- **IBM** launches business email IBM **Verse** on November 18, 2014
- **Nokia** launches Android Tablet **Lollipop** on November 18, 2014
- **Micromax** unveils Yu on November 18, 2014
- **AppleiPad Air 2** and **iPad Mini 3** go on sale in India on November 29, 2014

Indian IT companies

- **TCS** sponsors New York City marathon (world's largest marathon with TCS sponsoring for the next 8 years); it had 50,000+ participation on November 2, 2014; starts dedicated offshore centers in Japan
- **Infosys** signs $ 200 million contract with Visa in November 2014; set to hire 2,100 in USA in year 2014
- **Tech Mahindra** buys US-based networking company **Lightbridge Communications** for $ 240 million on November 20, 2014
- **Cognizant** buys **Odecee** (Australia & New Zealand based digital solutions company) on November 12, 2014
- **Mindtree** to open one more European Centre in 2014-15
- **BhartiAirtel** to sell 4,800 mobile towers in Nigeria for ▢ 6,463 crores
- Data center major **CtrlS** plans 2 data Centers with ▢ 626 crores investment

MNC companies in India

- **Cisco** to invest $ 1.7 billion in India in the year 2014-15
- **Microsoft** starts high end cloud offering in India

- **Ricoh India** gets ☐ 1,370 Crores order from Department of Posts on November 27, 2014 to connect up 1.29 Lakhs rural Post offices in the country
- Chinese e-commerce major **Alibaba** talks of more investments in India
- **Dell** to expand manufacturing in India
- **Visa** to open Tech Center in Bangalore
- **Amazon** to open fulfillment center in Gujarat
- **E-bay** plans major expansion in India next year
- China's **Xiaomi** set to make phones in India
- **China Union Pay** starts India office; plans partnerships with NPCI's **RuPay** on November 8, 2014
- Alibaba-backed **Quixey** set to buy Bangalore based mobile application start-up **Dexetra**
- **Uber** starts service that is even cheaper than auto on November 19, 2014
- Brazil's **Tripda** (ride sharing App) starts India operations on November 23, 2014

Education & Research

- **Mangalyaan** (India's Mars mission) on 2014 list of Top 25 inventions Time Magazine
- **Infosys Science Prizes** announced on Nov 13, 2014
- **ACM Fellows** list announced in November 2014
- **GRE Applications** from India increase by 60% in 2014

People

- 13-year old whiz-kid Shubham Banerjee develops **Braille printer** and gets venture funding on November 6, 2014
- Infosys co-founders Kris Gopalakrishnan and Shibulal launch business incubator **AxilorVentures** on November 18, 2014
- Guinness land speed record holder **Andy Green** visits India and gives IET Talk at Infosys on November 13, 2014
- South Carolina Governor **Nikki Haley** and marketing Guru **Philip Kotler** visit India in November 2014

Infrastructure

- **Schindler Electric** commissions state of the art **manufacturing plant to make elevators** at Chaken, Pune on November 4, 2014
- **Reliance** Power commissions **world's largest solar project** (100 MW built at a cost of ☐ 2100 Crores) in Jaisalmer, Rajasthan on November 11, 2014

Interesting Applications

- India to offer online services for 200 permits and target 50th position for doing business globally (from current 142nd position)
- Government initiates e-Life certificate - JeevanPraman - so that millions of pensioners need not have to give a physical life certificate every November; this innovative application using

7

AADHAR goes live on November 15, 2014

- Airtel launches "One Touch Internet" for first time users in multiple languages on November 6, 2014
- Visa on Arrival through Electronic Travel Authorization for citizens of 43 countries launched on November 27, 2014
- 50 districts chosen for digitizing land records
- Taxi Apps making taxi fares affordable forces auto rickshaws to reduce fare in November 2014! Technology helping common man!
- Housing.com launches "online only" Tata ValueHousing property thru interactive app

Interesting numbers

- **Telecom subscriber** base on October 31, 2014 stood at 962.63 million with 935.35 million mobile subscribers and 27.28 million wire-line subscribers (with net addition of 5.14 million mobile subscribers and net reduction of 0.12 million wire-line subscribers in October2014) (TRAI Press Release No. 80/2014 dated December 5, 2014)
- **India's Foreign Exchange** on November 30, 2014 was at $ 315.9 billion (RBI)
- **Indian Rupee** stood at 62.03 against USD on November 31, 2014 (RBI)
- On November 30, 2014 **BSE Sensex** and **NSE NIFTY 50** (Indian stock market indices) were at 28,694 and 8,588 respectively (Reuters)
- Oil price hits four year low of $ 82 on November 5, 2014 and below $ 75 per barrel on November 27, 2014, a new record
- Wholesale inflation drops to 1.77% (5-year low) on November 14, 2014
- 20 years of mobile in India sees tariff drop from ☐ 16.80 to ☐ 0.60; customer base near zero to 962 million; handset price starting from ☐ 45,000 to ☐ 850; revenue from near zero to ☐ 2.3 Lakh Crores!
- Bombay Stock Exchange (BSE) market capitalization touched ☐ 1 Lakh Crores on November 28, 2014
- Buoyed by early success India upgrades new bank account target (Jan Dhan Yojana) to 100 million from 70 million
- Prime Minister Modi has 25 million fans in Facebook and 8 million followers on Twitter
- Flipkart to hire 12,000 Amazon to hire 13,500 this year!
- Facebook messenger user base touches 500 million in November 2014
- Indian user count of WhatsApp crosses 70 million in November 2014
- Hero sells 1 million two wheelers in 37 days on November 3, 2014
- Apple iPhone shipments cross 1 million in India during October 2013 - September 2014
- Alibaba sales on 11/11/2014 cross $ 8 billion!
- Rohit Sharma gets double century highest ODI cricket match score in November 2014
- Indian Net population to cross 300 million by December 2014
- Badrinath temple that closed Darsan on November 21, 2014; the number of pilgrims dropped from 12 Lakhs last year to 1.8 Lakhs this year due to land slides in year 2013
- **Indigo Airlines** inducts its 100th plane on November 3, 2014 (8th year of operation)

14 Key developments in IT in the year 2014

1. **Modi** makes it to the top: Thanks to his tech-savvy advisers, Prime Minister Narendra Modi has been using social media very effectively. He made it to the No 1 position of Reader Poll of **TIME** person of the year (**TIME** Magazine, December 8, 2014)

2. <u>Nokia</u> is no more: **Nokia** dominated global market for mobile phones for nearly 20+ years; at its peak, Nokia manufactured nearly 500 million handsets a year! With Microsoft purchasing Nokia handset business in 2012 and Microsoft Devices launching Lumia 535 without **Nokia** brand in November 2014, Nokia is no more!

3. <u>Indians matter in IT</u>: With India-born Microsoft employee **Satya Nadella** taking over as the third CEO of Microsoft in February 2014, history was made; in the past ten months Microsoft stock price has steadily increased and on November 20, 2014 Microsoft became the No 2 global brand, surpassing Exxon Mobile!

4. **AADHAR** gets its *aadhar*: With change of government and Chairman Nandan Nilekani entering politics, there was uncertainty about the fate of AADHAR (ID for every Indian); with renewed push from Modi government for DBT (Direct Benefit Transfer), AADHAR is getting its due, as a truly transformational project.

5. *Raja* (Government) goes to *Praja* (Citizen) thru IT: With President of India launching **Karnataka Mobile One** on December 8, 2014 that 600+ government services are available to citizens on their mobile phone, truly transforming governance.

6. <u>Cities to go smart thru IT</u>: 100 **Smart Cities** project is a reality today; it was discussed during Prime Minister's visit to Japan, Chinese Premier's visit to India and Cisco / Google / Microsoft C.E.Os.' visit to India. With IoT (Internet of Things) getting enough attention in the year 2014, IT will transform city and municipal lives for the better in the next decade.

7. <u>IT makes city travel Uber cool</u>: **Ola Cabs** and **TaxiForSure** successfully launch Apps-based taxi hailing in several Indian cities in the year 2014. In many cases travelling public is able to hire a taxi at the cost of an auto-rickshaw. Such services will fundamentally improve access to public transport for ordinary citizens in future, notwithstanding aberrations like Uber taxi case in Delhi in November 2014.

8. <u>IT reaches healthcare to Indian homes</u>: Serial entrepreneur K Ganesh brings down information asymmetry between healthcare providers and healthcare consumers thru **Portea**, leading to more efficient delivery of healthcare services at the doorsteps of customers.

9. <u>IT to power the most demanding economic reform in India, viz., **GST**</u>: Finally, the Government introduces GST (Goods & Services Tax) legislation in the Parliament in December 2014 and paves the way for a sophisticated and efficient tax administration on par with other developed countries. GST will be supported by an IT backbone (GST Net) so that GST will start rolling from April 1, 2016

10. <u>IT start-ups make waves</u>: Indian e-commerce company **Flipkart** creates history; hits **run-rate of $ 1 billion** for the year 2014-15; attracts millions of dollars investment from global investors; forces Amazon CEO to announce $ 2 billion investment in India; has **Rs 610 crores sales in 10 hours** on October 6, 2014; becomes the **exclusive platform** of sale for iconic products like **Moto G** and **Xiaomi Mi3**; becomes the **No 1 recruiter** in IIT's, IIIT's and IIM's; e-commerce enters mainstream in India in the year 2014

11. <u>Indian IT companies make history</u>: **TCS** market capitalization exceeds Rs 5 Lakh Crores in July 2014 (more than the combined vale of CSC, Fujitsu, Xerox, Unisys and CapGemini); another iconic company **Infosys** founders leave management control completely to professionals led by Vishal Sikka (ex SAP) in October 2014.

12. <u>Indian Science reaches global headlines:</u> With major successes in the year 2014 – Mars Orbiter Mission (MoM) (November 5, 2013 to September 24, 2014), satellite-launching-as-service for Germany, Canada & Singapore (June 2014), making the first moves for India's own GPS equivalent (October 2014) and stepping towards manned spaceships (December 18, 2014) - it has been a wonderful year for India. *Mangalyaan* becomes Best Inventions of 2014 (**TIME** Magazine); ISRO Chairman Dr Radhakrishnan is Top 10 List (**Nature**)

13. <u>Global IT companies in headline news</u>: The iconic company **HP** splits into two corporations – **HP Enterprise** and **HP Inc**., with nearly $ 56 billion turnover each on October 31, 2014; **IBM** selling off its low-end x86 server business to Lenovo in September 2014 and exiting semiconductor business in October 2014, IBM will be very different from the year 2015!

<u>Finally, the year 2014 will be etched in gold for India (with or without IT)</u>

14. <u>Nobel Prize for an Indian of post-independent India</u>: With Kailash Satyarthi (born in 1954) getting Nobel Peace Prize in October 2014, history was made in India. The last time Nobel Prize was bagged by a person born in India and worked in India was Sir CV Raman; it was way back in 1930. Hargobind Khorana (1968), Mother Teresa (1979), S Chadrasekhar (1983), Amartya Sen (1998) and Venki Ramakrishnan (2009) either did their Nobel Prize winning work outside India or not born in India.

1) There is an allegation that India generates only human resources in IT sector for other countries. Is there any possibility for India to stand alone in the global IT industry?

In a globalised world with Internet playing an important role, IT professionals are a global resource and as such we should be proud that India is producing the largest number of IT professionals. India would soon have a unique position with Indian professionals creating products and platforms that are used globally. Already,

- **Finacle** (core banking product from Infosys) powers more than 460 million bank accounts (16% of the global market share)
- **Magzter** (from Chennai-based Apps company) is a widely used platform on which several magazines have built their online versions. In the years to come, we will see more such success stories.

2) What is the future and importance of IT research in India?

To grow and sustain in any technology-dominated area, research is absolutely important. In the past decade IIT's and IIIT's have stepped up research; more funding is available and many young researchers are returning to India. Spurred by low global rankings, even Government (that controls R&D establishments and their funding) is realizing the importance of research. Global corporations are also increasing their activities in India.

3) Where does India stand in the global arena of IT research?

We are only starting to matter in this area; luckily, all three key critical success factors are falling in place

- Young researchers are joining Indian Institutions in large enough numbers,
- Research funding is increasing, and,
- Indian R&D is getting global recognition.

4) How do you tackle the stress issue in IT sector? How do you train students to handle this?

This is an over-played idea. Over the decades, productivity of office workers in India had been very low (thanks to Government jobs with lifelong jobs and routine promotions); much of IT being white-collar, the higher productivity and constant evaluation along with adherence to deadlines and budgets are often mistaken as "stress". One should recall Mahatma Gandhi "more people have problems with under-work than over-work". IIIT-B students generally come back and tell me that the rigor of IIITB prepares them well, and the so-called ″stress″ in IT industry is ″no stress″!

5) Can IT and research be developed as a solution to India′s complex problems?

Absolutely. Look at the impact of

- Railway Reservation system,
- Bhoomi - Land Record system,
- Bangalore One and Electronic Delivery of Services,
- Passport delivery system,
- MCA21 - Online quarterly filing of returns by 100,000+ corporations,
- Online filing of Income Tax and Tax deduction at source,
- Online banking,
- E-Library, and,
- E-Learning

They all have made a huge difference to "Aam Admi". All these are possible, thanks to creative applications of IT that benefited from R&D

6) Recently, a Union minister made a statement that almost all of India's reputed institutes have brilliant students but not a brilliant pedagogy system. Do you agree with this?

Unfortunately, it was due to Government funding Universities at sub-critical levels, not providing full freedom to academic Institutions and administering R&D thru archaic rules that has led to poor ranking that India's Institutions have today. Many countries including China pump billions of dollars into Universities, unlike India that has put in much less into Universities. Chinese academics and academic Institutes enjoy freedom comparable to what their counterparts in USA enjoy. Luckily, things are improving and hopefully both the Government and Universities together will change the position dramatically in the next decade.

7) Most of the technological and management institute end up looking like a training unit of a corporate. How can this attitude be changed?

There is too much emphasis on "relevance" than "rigor". Corporations that employ graduates must look for rigorous and deep education that can enable the graduates whom they employ, to contribute significantly over many years; often, thanks to misplaced HR Policies, corporations tend to be swayed by immediate "employability". That explains the current situation.

Changing face of enterprise applications – opportunities and challenges

The first generation of enterprise applications such as payroll processing or inventory control, focussed on **efficiency** and **scale** – ability to process payroll of thousands to tens of thousands of employees with zero error, month after month on the "pay day", or, tracking inventory levels of thousands to millions of items on a daily basis, day after day, for years.

The second generation of enterprise applications focus on **effectiveness** and **scope**, ERP / SCM / CRM, for example, that captures "data" and "processes", so that the computerization is end-to-end; managing the full life cycle of order, stock, production, packing, delivery, support and billing, by way of integrated processes. With the scope enlarging beyond simple **function** - finance, materials or logistics) to the **full enterprise**, enterprise systems in the last two decades have "transformed" businesses. With the arrival of the Internet, digitization and global connectivity on a 24x7 basis, industries like travel (e-ticket), trading (online trading), retail (e-commerce) and banking (Net banking) have been fundamentally changed industries.

The mobile revolution of the last decade, combined with the digital revolution of the past three decades, have to led **smart devices (mobile phones and Tablets)** that are fundamentally changing the very process of information production and consumption – travelling sales folks can generate leads, take orders, check status, redress customer grievance on a 24x7 basis, using interfaces that are intuitive, personalized and easy-to-use using next generation user interfaces (beyond GUI) involving touch, gesture and voice.

1. Naturally, enterprise information systems are witnessing **consumerization.** Today's end users expect enterprise applications to be as intuitive, personal and friendly as Facebook on iPhone / Android phone!

2. With the maturity of cloud computing, 24x7 availability of mobile devices and the multiplicity of devices (at home, office, customer site or video-conferencing room), today's end users expect all enterprise applications and data to be available on the cloud - the way they interact with Gmail or Google Apps or Apple iTunes, leading to **cloudification** of enterprise applications, at a scale unprecedented in human history.

3. With the economy of scale unleashed by microprocessor revolution (and nano-scale semiconductor industry today), extra-ordinary improvements in price-performance are available to end users (typical Moore's Law) that the users themselves decide the information consumption, rather than the IT departments. Naturally, today's information processing tools are witnessing unprecedented **commoditization** too!

The **3 C's** - trio of **consumerization**, **cloudification** and **commoditization** pose unusual challenges for software industry; end user expectations are sky-high; the budgets are shrinking in IT departments but bulging elsewhere; users need

super-fast development times; third party Apps developers are able to create micro enterprise applications that are enormously useful. The recent statistic of nearly 50% of online banking in India originating from App-based banking on smart phones, rather than from Internet-connected PC's is one data point, to validate this changing trend.

Such a trend poses

1. **People challenge**, in terms of skill-set mismatch between the training they receive in Universities Vs the skills demanded by Apps development
2. **Process challenge**, by way of delivering applications thru an App Store rather than from the in-house corporate server delivering data and applications to end-user client PC's in client-server mode
3. **Business challenge** of client engagement (short term) and client servicing (changing billing cycles and business models)

Of course, such challenges do open up new opportunities – the 4-million strong **Indian IT services industry** can get into **product** space through the **App** route, with much faster turn-around time and with much smaller investments. Government, social sector and NGO's too can benefit from IT revolution, thanks to dramatically low demands on initial investments in hardware, software and networking gear.

Already **Flipkart**, **RedBus**, **ClearTrip**, **MuSigma** and **Fractal Analytics** are emerging as IT majors. The impact of the **3 C's** will surely be disruptive in nature for both the key players –

1. **Employees** (students graduating from Institutes), and,
2. **Employers** (the companies that recruit from campuses)

It will be interesting to see as to how the hugely successful Indian IT industry would adapt to this paradigm shift.

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