Technology Futures –2017

A Presentation by
Dana R. (Rick) Richardson CPA.CITP, CGMA

ADDDITIONAL MATERIALS FOR ATTENDEES

I have set up an account for you on ShareFile, my secure client extranet. ShareFile is a tool for sending, receiving, and organizing your business files online. It can be used as a password-protected area for sharing information with clients and partners, and it's an easy way to send files that are too large to e-mail.

In your browser, type in the following URL:

http://RickRichardson.ShareFile.com

You will see a sign-in dialog. Complete the dialog as shown below.

The account will remain open from the day of the speech for two weeks after the conference. Please be sure to download the materials within that timeframe.

You will be downloading a single compressed file in ZIP format. That means that you will have to have software to unzip the file. If you double-click on the file and it doesn't decompress, then go to the site listed below to download a free unzip utility.

WINDOWS	MACINTOSH
http://www.unziplite.com	http://www.stuffit.com

Once you have decompressed the ZIP file you will have a folder with several handouts in it and two folders with the slide show. The slides are too large to fit in a single file, so I've split it into two pieces. Part 1 goes through Hardware and Part 2 is all of the rest of the presentation

To start the movie, double click on the Index.html file and it will run in your browser. On Windows machines, **Firefox** is best. On Mac machines, both **Safari** and **Firefox** are equally good.

When you run the slide show, you can move forward with a single left mouse click or you can use any of the following keys: right arrow, down arrow, return, space. You can use the left arrow or up arrow to move backwards. You will also see a small up-arrow on the menu slides for each section of the speech.

If you click in the arrow, it will take you to the first slide of that section or sub-section. Every slide has a home symbol in the lower left.

If you click on the home, you will be taken to the first main menu.

One of the handouts is a flyer describing my weekly newsletter, *Technology This Week*. As I do my research for this speech, I gather all of the week's current events and other articles of general interest into an easy 20 minute-read that is published every Sunday.

You can subscribe to the newsletter by visiting this URL:

www.TechnologyThisWeek.net

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I. Prior Year Predictions
   A. Good
   B. So Close
   C. Poor

II. Today
   A. Companies
      1. Apple
         a. Challenges
            1) in April, the company's 13-year growth streak came to an abrupt end
            2) The iPad still has a commanding market share but that market is contracting faster than anyone anticipated
            3) Despite the fact that the iPhone 7 was a modest upgrade, it saw record-breaking sales
         b. Acquisitions & Technology
            1) Machine Learning
               a) Tuplejump
               b) Turi
            2) Facial Recognition
               a) RealFace
            3) Fingerprint-reading touchscreen
         c. By The Numbers
            1) Cash on hand
            2) 3 million apps in App Store
            3) iPhone global smartphone market profits percentage for 2016
            4) Macintosh global PC market profits percentage for 2016
            5) Services are now about a $30 billion business
            6) Apple Pay
         d. Executive Changes
            1) Russ Salakhutdinov - AI
            2) Dr. Ricky Bloomfield - HealthKit
            3) Jonathan Zdziarski - Security
      2. Google
         a. Challenges
            1) Advertisers pay less for each click on mobile ads than they do on desktop computers but the growing number of clicks on mobile ads is beginning to make up for that. Overall, advertising is experiencing robust growth
            2) Alphabet's "other bets" – home automation and Google Fiber are still losing almost $1 billion a quarter

      3) Google has the world's biggest and most powerful cloud, but because Google is built around online advertising, it lags behind the other competitors in the ability to assist enterprises in deploying what they need in its cloud

  b. Acquisitions & Technology
    1) Orbitera
    2) Waymo

  c. By The Numbers
    1) Search queries from phones
    2) Google Play store
    3) New Android smartphone models launched in 2016
    4) Chrome browser on mobile devices

  d. Executive Changes
    1) Sam Ramji (Coming)
    2) Chris Urmson (Going)
    3) Amit Singhal (Going)

3. Microsoft
  a. Challenges
    1) The world's pivot away from personal computers remains a drag on the company's performance
    2) The Hybrid Cloud is a do-or-die scenario for Microsoft
    3) The company's hardware ventures under the Surface brand have done extremely well but with not much revenue impact

  b. Acquisitions & Technology
    1) LinkedIn

  c. By The Numbers
    1) Devices are running Windows 10
    2) People using Microsoft Office
    3) Outlook.com users
    4) Cloud revenue by 2020

  d. Executive Changes
    1) Cindy Rose (Coming)
    2) Lee Hickin (Going)
    3) Kevin Turner (Going)

4. Amazon
  a. Challenges
    1) Retail Brick & Mortar
    2) Amazon has figured out how to combine the entrepreneurial culture of a small company with the financial resources of a large one. And that allows it tackle problems most other companies can't. Like the Kindle reader, Amazon Web Services and more recently, Home Automation Hub Echo with assistant Alexa.
    3) AWS

  b. Acquisitions & Technology
    1) NICE
    2) Curse
    3) Biba
  c. By The Numbers
    1) Robots in its warehouses
    2) Prime members
    3) Stock price increase
    4) Cyber Weekend
    5) Employees
  d. Executive Changes
    1) Lee Hickin (Coming)
    2) Adam Selipsky (Going)
    3) Sergio Bucher (Going)

B. Software
 1. Apple Siri
 2. Google Assistant
 3. Microsoft Cortana
 4. Amazon Alexa
 5. Samsung Bixby

C. Hardware
 1. Telematics
  a. Autonomous automobiles will go mainstream in 5 years
  b. Size of the Market
  c. The flood of data
  d. Federal Requirements
  e. Testing
 2. Robotics
  a. IBM Multi-Purpose Eldercare Robot Assistant (IBM MERA)
  b. Atlas Next Generation – Boston Dynamics
 3. AR/VR
  a. General
  b. VR in Medicine
  c. AR in Business
 4. Gadgets

D. Communications
 1. Wi-Fi Breakthrough - MegaMIMO 2.0
 2. The Cloud
  a. Move From Private to Public
  b. Hyperconvergence
  c. Enterprise Software Arrives

E. Block Chain
1. Definition
2. Potential uses for block chain in accounting and auditing
   a. Traceable audit trails
   b. Automated audit processes
   c. Authentication of transactions
   d. Registry and inventory system for any asset
   e. Tracking ownership of assets
   f. Development of "smart contracts"
3. A new paradigm

III. Tomorrow
A. Hardware
1. Nano Technology
   a. Nano chip storage - (Copper and chlorine atoms)
   b. Atomic Hard Drive - (IBM)
   c. Bluetooth System-In-A-Package (SIP)
2. Fast Fiber
   a. Google Fiber
   b. Nokia Bell Labs - major leap with a new optical breakthrough
   c. Chinese firm FiberHome announced their world record
B. Artificial Intelligence
1. Overcoming the Fear
2. Internet of Things
3. Predictive Analytics
4. Evolution
C. Medicine
1. Cancer Research
2. Smart Stitches

IV. Day After Tomorrow
A. It's Back To The Future
1. 1960-1970 Mainframe Era
2. 1980-2000 Client-Server Era
3. 2005-2020 Mobile-Cloud Era
4. 2020-   Edge Intelligence Era
5. Wintel Era
6. GAFA Era
B. Machine Learning
1. Definition ("Is There a dog in this picture?")
2. A new direction of travel
   a. From direct, physical interaction with data
   b. To abstract inference from massive amounts of data

3. Examples
   a. Google - Alpha Go
   b. Xero
C. Internet of Things
   1. The AI world will have a head-on collision with the Internet of Things
   2. Gartner estimates
   3. Overall IoT market growth
   4. Industry 4.0 – Industrial Internet of Things (IIoT)
D. Edge Computing
   1. From The Cloud to the Edge
   2. An autonomous car is a data center on wheels
   3. Definition
   4. How Will Everything Work
      a. At the edge
      b. Parallel to OODA Loop
      c. The cloud still has a purpose – long-term learning

V. Preparing For Tomorrow
A. Courses
B. Books
C. Materials

VI. New Predictions
A. Big Data/Analytics
B. Communications
C. Hardware