GSCPA Southeastern Accounting Show

Tech Update

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Presented by J. Carlton Collins
www.CarltonCollins.com

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Technology Update

SMARTPHONES & MOBILE DEVICES
### BY J. CARLTON COLLINS, CPA

Smartphones & Mobile Devices – The evolution of mobile devices took a quantum leap forward in 2007 with the emergence of the Apple iPhone®, and again in 2010 with the emergence of the Apple iPad®. With these two devices, Apple launched the smartphone and tablet industries, and following suit, dozens of manufacturers have entered these markets with their own versions of these devices. Presented below is a brief discussion of each of these devices.

Smartphones – A smartphone is essentially a cellular phone and a small computer combined into a single portable hand-held mobile device, with touch screen controls. Although a smartphone's screen and keyboard is smaller than that of a desktop or laptop computer, the capabilities are effectively the same. For example, smartphones provide browser-based internet access, contact and day planner management, and strong e-mail capabilities. In addition to providing similar functionality as a computer system, these devices also offer the added benefits of portability and instant-on access.
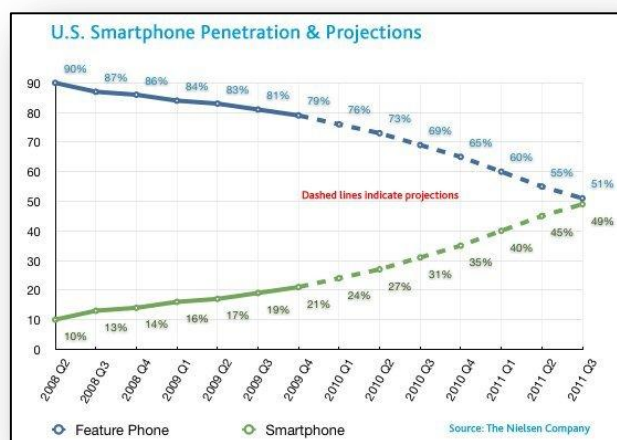
Many indicators suggest that smartphones will soon dominate the landscape. According to Small Business Computing, 65.8 million people in the United States owned smartphones as of January 2011, with sales quickly accelerating [1].

A 2011 study prepared by the Nielsen Company documents the recent rise in the sale of smartphones and a comparable decline in the sale of regular cellular phones [2]. As pictured to the right, Nielson predicts that these trends will continue and ultimately, smartphone sales are projected to exceed the sale of regular cellular phones by the end of 2011. A similar report prepared by Deloitte Consulting predicts sales of 375 million smartphones in 2011, just 15 million units shy of the projected number of personal computers sales in the same time frame. [3]
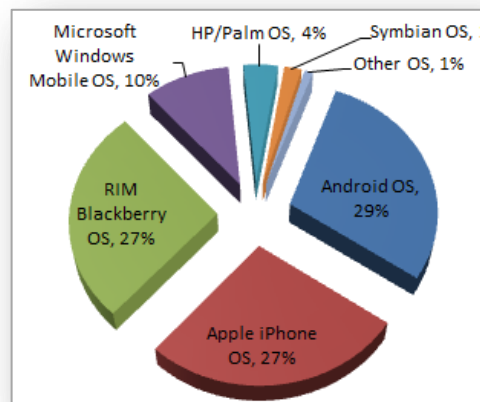
The smartphone operating systems deployed in the US are dominated by three primary solutions – Android (29%), Apple iPhone® (27%), and RIM BlackBerry® (27%), as pictured in the chart to the right. Previously BlackBerry® units led the market until the Apple iPhone® launch in January 2007, followed by the unveiling of the Android[tm] in November 2007. Since then both the Apple iPhone® and Android[tm] operating systems have gained market share, with Android[tm] taking the lead.

Smartphone technology continues to improve rapidly, even exponentially. Companies interested in updating their travel and expense management functions should be aware of the various smartphone options, and choose those solutions that best fit their budgets, preferences, and business operations.

Current Top Smartphones:

1. Apple iPhone – Apple OS, 3G, 32 GB. 3.2 megapixel camera
2. Motorola Droid – 3G, 15 GB, 5.0 megapixel camera
3. HTC Nexus One – Droid OS, 5.0 megapixel camera, 10 hours of talk time
4. BlackBerry Storm 2 - 3.2 megapixel camera
5. Palm Pre – Palm Pre OS, 3.0 megapixel camera, 5 hours of talk time
6. T-Mobile MyTouch - 3G, 3.2 megapixel camera
7. BlackBerry Bold Series – 3G, 3.2 megapixel camera
8. HTC Hero – 3G, 5.0 megapixel camera
9. Nokia N97 Mini – 2G & 3G, 5.0 megapixel camera
10. T Mobile - 3.0 megapixel camera, 315 minutes talk time

Top New Smartphones:

1. Motorola's Droid Bionic – 4G, 8.0 megapixel camera, HDMI Out
2. Motorola Atrix – 4G, includes an 11 inch notebook computer
3. LG Revolution – 4G, 5.0 megapixel camera

4. <u>HTC Thunderbolt</u> – 4G, basically a 4G version of the HTC EVO
5. <u>HTC EVO Shift</u> – 4G, slider keyboard
6. <u>HTC Inspire</u> – 4G, 8.0 megapixel camera
7. <u>Apple iPhone 5</u> - 4G (Not expected until 2012, Apple trying to hurry things up)

Comparison of Smartphones by features:

http://en.wikipedia.org/wiki/Comparison_of_smartphones

Smartphone Operating Systems:

Nokia's Symbian has long been the dominate smartphone operating system, but Goggle's Android has come on strong in the past two years to blow past Apple and overtake Symbian. Microsoft is barely on the radar.

Technology Update by J. Carlton Collins August 2011
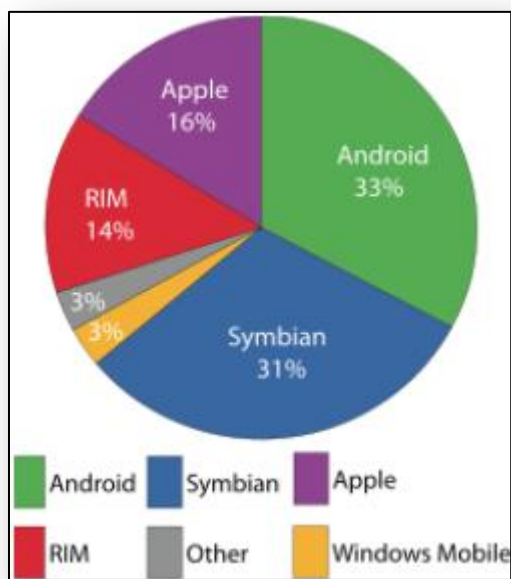
Tablets

By J. Carlton Collins, CPA

Microsoft introduced the first tablet in 2001, designed (basically) as laptop computer with built-in touch screen technology. While the concept was well received, tablet technology fell short of expectations until January 2010 when Apple released the iPad®, which redefined the concept. The new Apple iPad® was thin and light, offered instant-on technology, and provided a quick, intuitive touch screen.

While Microsoft modeled their tablet after a laptop, Apple modeled theirs after the iPhone®, and as a result, the Apple iPad® tablet is primarily an oversized iPhone®, without the cellular calling capabilities. The popularity of these devices is rising dramatically. By January 2011, at least seventeen brands of tablets had been released. A partial listing of tablets from 17 suppliers, along with the estimated retail pricing is summarized in the table shown on the next page.

	Maker	Device	Price
1	Apple	iPad	$499 - $829
2	Archos	5 Models	$99 - $349
3	ASUS	EeePads	$400 - $1,000
4	Augen	GenTouch78	$150
5	Cisco	Cius	$999
6	Cruz	Cruz Tablet	$299
7	DELL	Streak	$549
8	Flat	FlatPad A10	$465
9	Haleron	X Droid	$249
10	HP	Slate 500	$799
11	ICD	ICD Vega	$249
12	Kno	The Kno	$599 -$899
13	LG	Optimus Pad	$150
14	MSI	WindPad 100	$500
15	Samsung	Galaxy Tab	$599
16	Toshiba	Folio 100	$500
17	Zenithink	ZT-180ePad	$299

As of the date of this report, the Apple iPad® is the clear leader in the tablet market, and early indications are that the recently released iPad2® will help Apple maintain that lead. The competition is expected to intensify as a multitude of newly released tablets offer consumers a variety of price points, sizes and

features. The Nielson Company predicts sales of 50 million tablets in 2011 [2].

Tablets offer the same benefits as smartphones, but with larger view screens, larger keyboard entry and no monthly cellular phone charges (some tablet manufacturers do offer 3G and 4G internet access for a monthly fee, in lieu of Wi-Fi internet access). For these reasons, tablet use among business travelers is expected to gain momentum throughout 2011.

Tablet Operating Systems:

Microsoft - Windows CE & Windows Mobile
Linux - Slackware
Google - Android & Chrome OS
Nokia – MeeGo
Apple – MAC OS X

APPS FOR SMARTPHONE AND TABLETS

BY J. CARLTON COLLINS, CPA

While smartphone and tablet devices are attracting enormous attention, it is the applications that operate on these smartphones and tablets that are driving the success of these mobile devices.

The vast quantity of available applications (often referred to as applets or apps) is a key factor fueling the success of smartphones and tablets. Software development kits (SDKs) offered by smartphone and tablet manufacturers have enabled third party developers to create more than one hundred thousand (100,000) new smartphone and tablet applications. These SDKs support a multitude of programming languages and development tools such as Java, Objective-C, C, C++, Cocoa, XML, Python, Ruby, CamelBones, and MacRuby to name a few.

The impressive collection of available smartphone and tablet applications covers a wide range of areas, including business travel. Consider the following examples: 1. Concur's mobile application enables business travelers to use their smartphone's camera to capture paperless receipt images and attach them to their expense reports for uploading. 2. This application also provides corporate workflow capabilities, which automatically escalate and routes expense reports to the appropriate supervisor for faster and efficient approvals. 3. Concur's mobile solution enables travelers to collect electronic hotel receipts and pay taxi and limousine fees using their smartphone to achieve cashless transactions which flow directly to the travelers' expense report. 4. Concur's TripIt application enables travelers to forward travel confirmations to plans@TripIt.com, and those details are automatically organized in the traveler's smartphone or tablet itinerary. 5. Other smartphone and tablet applications enable business travelers to quickly identify alternate flights in the event they are "bumped", suggest nearby restaurants, help to locate Wi-Fi access, keep apprised of the weather, locate the lowest priced gasoline in the area, and find local business establishments.

4G WIRELESS COMMUNICATIONS

BY J. CARLTON COLLINS, CPA

Third Generation (3G) telecommunications provides internet access at speeds up to 1/5th of a megabit per second, which is a satisfactory speed for many smartphone and tablet applications. However, Fourth Generation (4G) technology enables smartphones and tablets to connect wirelessly to the internet at speeds comparable to T1 landline connections. As a result, using 4G communications enables smartphones and tablets to access real-time information via the internet almost instantly. In theory, 4G enables communications at speeds up to 1000 megabits per second, but as a practical matter, most 4G implementations achieve speeds up to 40 megabits per second [35], due primarily to bandwidth limitations and restrictions imposed by providers. 4G technology represents a combination of several new wireless technologies as follows:

i.   **Multiple In Multiple Out (MIMO)** – MIMO technology allows data to travel simultaneously via multiple channels, instead of a single channel. This technology is likened to automobiles traveling a multi-lane highway, instead of a single lane highway. In both cases, the multiple channels (or lanes) accommodate higher volume.

ii. **Frequency-Division Multiple Access Scheme** – This technology improves on MIMO by allowing multiple users to share a common channel by inserting guard intervals between blocks of user data. The effect is to squeeze more data through a single channel by utilizing the natural time gaps caused by multi-path propagation among data blocks [4].

iii. **Dynamic Channel Allocation** – This load-balancing technology more efficiently allocates channels to base stations and access points to avoid co-channel interference among nearby channels. The effect is to help reduce dropped calls, eliminate idle capacity, and improve overall transmission speeds. [5]

iv. **Channel-Dependent Scheduling** – 4G incorporates an improved scheduling algorithm in which threads, processes and data flows are balanced to accommodate multiplexing, which is the simultaneous transmission of multiple streams of data.

v.   **WiMAX** – As wireless technology has evolved, developers have strived to identify the best protocols and radio frequencies to support distance wireless communications. In 2005, World Interoperability for Microwave Access (WiMAX) was approved by the Institute of Electrical and Electronics Engineers (IEEE) and in 2008, WiMAX began to emerge as a leading wireless protocol, enabling high speed transmissions of up to 25 miles. While WiMAX has been deployed on a multitude of frequencies, only three frequencies have been officially profiled by the WiMAX Forum as follows: 2.3 GHz, 2.5 GHz, and 3.5 GHz. [6] These

frequencies have been identified as being less susceptible to interference and are able to carry signals greater distances, with respectable reliability.

All together, these five technologies, combined with others not mentioned, comprise 4G technology. The emergence of 4G technology has helped to open the floodgates by making smartphone and tablet access to the internet a more satisfying experience due to increased speed, improved reception, reduced interference and fewer dropped calls.
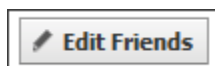
Facebook

As of July 2011, Facebook has more than 750 million active users. Like many software programs, Facebook is actually a lot of solutions rolled into one, as follows:

1. **Contact Organizer** - Facebook is a contact organizer that helps you organize your contacts, and your contact keeps the data current. It can include a wealth of information about your contacts, depending upon how much your contacts want to share.

2. **Search tool** – Facebook is a search tool that helps you search from people you know by location, school, or company…and you can also search friends of friends.

3. **Communications** - Facebook is also a communications tool that allows you to communicate one-to-one or one-to-many. You can send e-mails, chat live, or write on someone's wall for all to see (like a party line). Facebook can keep a permanent record of communications.

4. **Photos and Videos** - Facebook also helps you organize your photos and videos, and share them with your friends.

5. **Dating** – Facebook is a social tool that can be used for meeting new people that share your philosophies or live in your area. From time to time, Facebook has allowed you to search for people who share your views, likes and dislikes; but presently Facebook has removed this capability due to privacy concerns.

6. **Games** – Facebook offers thousands of games, most of which harvest your data when you use them. Therefore, I highly recommend that you refrain from playing Facebook games, such as Mafia Wars or Farmland.

7. **Useful Tools** – Facebook offers hundreds of useful tools such as a program for managing event invitations…here is a link to the most popular Facebook games and tools - http://statistics.allfacebook.com/applications/leaderboard/.

Facial Recognition - In 2011, Facebook added facial recognition software, which is both pretty cool and pretty creepy. Many people think that facebook might overstep boundaries and use this technology to further erode privacy.

Privacy Step – You can block your Facebook Wall from selected Facebook friends, by creating a Block List, as follows: From the Facebook main page, select **Friends** from the menu located under your profile picture near the upper left hand corner, and click the **Edit Friends** button located near the upper right corner of the page.


Click the **Create a List** button located near the top center of the page, and on the resulting **Create New List** dialog box, type the phrase "**Blocked List**" in the **Enter a Name** box.
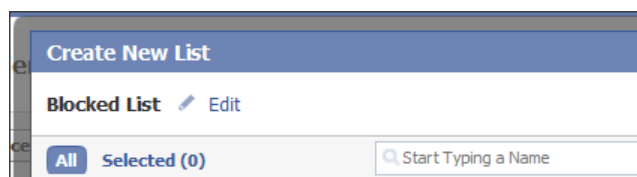
Browse through your Facebook friends listing in the **Create New List** dialog box and click each friend you want to block from your Facebook Wall. When you are done, click the **Create List** button located in the bottom right corner of the dialog box.

Next, edit your Facebook privacy settings as follows. From the main menu, select **Account, Privacy Settings** in the upper right hand corner. On the resulting **Choose Your Privacy Settings** page, under the sharing on facebook heading, select **Custom**. Next, click the option **Customize settings** located near the bottom center of the page. Click the drop down menu labeled **Posts by me**, and select **Custom**. Under the **Hide this from** heading, type the name "Blocked List" (or the name of the list you created) in the **These people** box. Click the **Save Setting** button.
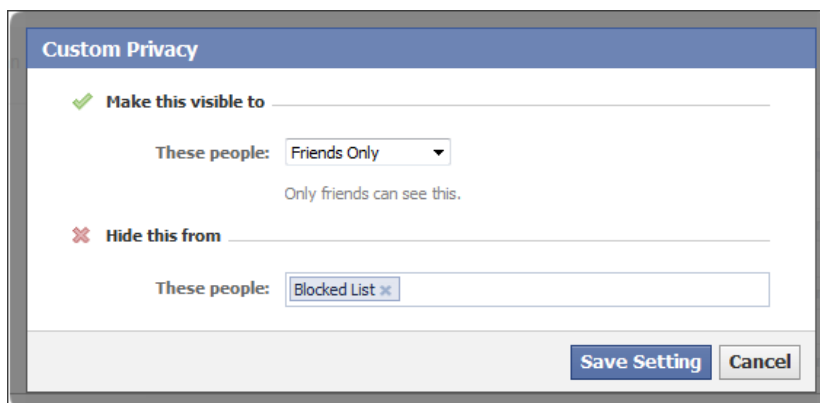
Thereafter, Facebook friends that you include in your Blocked List will not be able to view your Facebook Wall. As you confirm (accept) new friends in the future, Facebook will offer the opportunity to add them to a list, including your Blocked List.

Quick tech Update Topics

1. What are the newest technologies?
    a. 4G
    b. Smartphones
        i. Voice Recognition
        ii. Navigation with traffic congestion
    c. Tablets
    d. Apps
    e. Cloud computing
        i. Windows Live
        ii. Google Docs
    f. Touchscreen technology

2. Operating System Usage

    a.

Source	Net Market Share[27]
Date	May 2011
All versions	88.67%
Windows XP	52.41%
Windows 7	25.89%
Windows Vista	9.93%
Windows Server 2003	0.21%
Windows 2000	0.2%
Windows 98	0.03%

    b. Reasons to move to Windows 7
        i. More secure
        ii. Ram supported: 4GBs, 128GBs, 192GBs for XP, Vista and 7 (64 bit).
        iii. Processors Supported: 1, 64, 256 for XP, Vista and 7, respectively.

3. The Tech Savvy CPAs Tool Box of 2011
    a. Powerful desktop with multiple monitors
    b. Laptop for computing on the go
    c. Tablet for reading mail, the web, books, photos, videos, etc.
    d. Smartphone, with ear piece

4. Technology Priorities
    a. E-Mail Security
        i. PGP (acquired by Symantec last year)
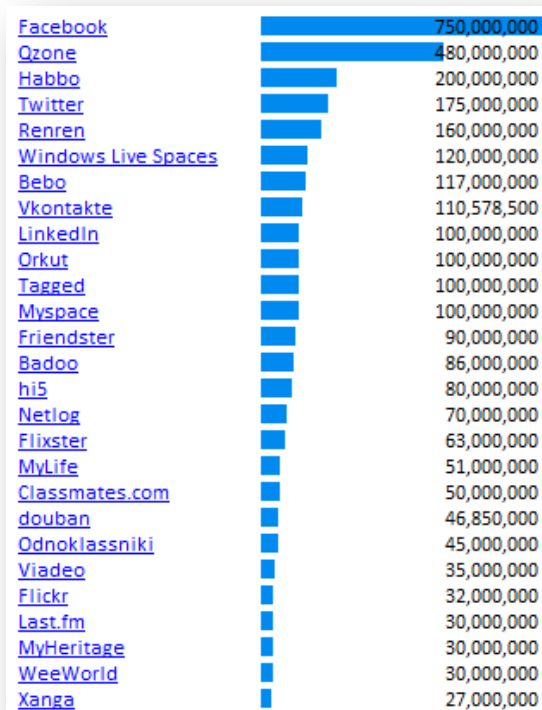   b. Laptop Security

        i.   PGP (acquired by Symantec last year)
        ii.   Microsoft EFS
        iii.   Microsoft BitLocker

  c. Paperless
  d. Cloud Initiatives

5. Established Technologies still going strong:
  a. Remote Access
        i.   Increased usage for supporting clients
        ii.   Accessibility via handheld devices
  b. Skype
  c. Multiple Monitors
  d. Automated online backup, data saved in native format

6. QuickBooks
  a. Moving to hosted QuickBooks Enterprise
  b. Opportunities in QuickBooks Consulting
        i.   QuickBooks ProAdvisor Program $399
        ii.   Unlimited support, from within US
        iii.   Now requires you to pass a test to be promoted
        iv.   16 hours of CPE credit
        v.   Resell products from 20% to 100% off

7. Biggest Technology Mistakes Being Made by CPAs Today
  a. Not enough user training on Office, accounting and other applications
  b. Keeping computers too long, more than 3 years
  c. Not deploying scanners
  d. Not making proper backups
  e. Not encrypting e-mail
  f. Not deploying smartphones
  g. Out of date software
  h. Improper UPS and battery power protection for desktop computers

8. New Accounting Software Solutions Gain Traction:

  a. **ZOHO Books** - Online accounting solution, $24.95 per month, multi-currency, share and delegate workflow, dashboards, recurring invoices, thank you notes. http://www.zoho.com/books/

  b. **Outright** – Cloud based solution that eliminates data input by grabbing revenue and expense transactions from your bank statements, credit card statements, scanned in receipts and your Paypal account. $24.95 per month. http://outright.com/

c. **Xero** – Google's Xero is online accounting priced at $19 per month, includes inventory, payroll and invoicing solutions along with fixed asset depreciation, contact management, multi-currency, dashboard reporting workflow and electronic banking. http://www.xero.com/

d. **FreshBooks** – Bevy of modules including time tracking, estimating and staff management, cloud based solution priced starting at free to $40 per month. http://www.freshbooks.com/

9. 52% of CPA Firms are now Paperless
   a. If we took all of the information and store it in books, we could cover the entire area of the United States or China in 13 layers of books. – Dr. Milton Hilbert.
   b. Key paperless solutions used by CPAs include:
      i. CCH, a Wolters Kluwer business
      ii. Concur Technologies
      iii. Doc.It
      iv. Fujitsu Computer Products of America
      v. ShareFile
      vi. SmartVault (includes plug-in for QuickBooks)

10. YouTube:
    a. More content published to YouTube in a 60 day period than the three major U.S. television networks created in the past 60 years. 490 million unique users worldwide per month, who rack up an estimated 92 billion page views each month.
    b. YouTube is a phenomenal learning center. ***Carlton's Prediction*** – ***YouTube University will be the world's largest learning center within 5 to 10 years.***
    c. www.tubechop.com – Crop a portion from any YouTube video
    d. www.mixpod.com – Combine cropped portions of YouTube clips
    e. www.vixey.com – Convert YouTube clips to self-running MP4s on your computer
    f. Uploading to YouTube is Easy (quick demonstration)
    g. Embedding Code (Bandwidth and Codecs come from YouTube web site)

11. Web Content Filtering:
    a. Set Google or Bing search preferences to "Strict"
    b. Install SonicWall router/firewall with filtering at the router
       i. NSA 3500 – 1GBit Speed, Wireless, Content Filtering, $851 and up

12. Skype
    a. Purchased by Microsoft for $6.5 billion.
    b. Call to computer (Skype-In), call to phone (Skype-Out)
    c. Video Calls – Options Video
    d. Conference Call to up to 50 people ($4.95 for 24 hours) ($7.95 for a month)
    e. Auto Answer – Options, Calls

f.   Call forwarding – Options, Calls
g.   IM Setting to Only Contacts to keep out solicitations - Options
h.   Skype Access – Access over 100,000 hotspots around the world - Tools
i.   Video call Recorder – Under Extras
j.   Download many extras – File sharing, remote access, white boards, etc.
k.   Alternatives to Skype:
    i.   ooVoo
    ii.   GoToMeeting
    iii.   SightSpeed
    iv.   GoogleTalk
    v.   Gizmo project
    vi.   iChat
    vii.   VoIP Buster
    viii.   Jajah
    ix.   Amicima
    x.   ComBOTS
    xi.   OpenWengo
    xii.   Vbuzzer
    xiii.   Majic Jack
    xiv.   Vonage
    xv.   Trixbox

13. Social Network Sites:

a.   Social Media Related Patents
b.   More than 200 Social media Web Sites (excluding dating web sites) Here are top
     web sites by number of users:

Facebook	750,000,000
Qzone	480,000,000
Habbo	200,000,000
Twitter	175,000,000
Renren	160,000,000
Windows Live Spaces	120,000,000
Bebo	117,000,000
Vkontakte	110,578,500
LinkedIn	100,000,000
Orkut	100,000,000
Tagged	100,000,000
Myspace	100,000,000
Friendster	90,000,000
Badoo	86,000,000
hi5	80,000,000
Netlog	70,000,000
Flixster	63,000,000
MyLife	51,000,000
Classmates.com	50,000,000
douban	46,850,000
Odnoklassniki	45,000,000
Viadeo	35,000,000
Flickr	32,000,000
Last.fm	30,000,000
MyHeritage	30,000,000
WeeWorld	30,000,000
Xanga	27,000,000

   c.   Why would anybody pay $45 a year for Classmates.com?

14. Web 1.0 versus Web 2.0 versus Web 3.0

   a.   Web 1.0 - Passive, static web pages that merely allow one to retrieve information.

   b.   Web 2.0 – Participation, collaborate, Information sharing, cloud computing

   c.   Web 3.0 – Introduces logic, for example, search for an airline ticket and it also finds hotels, rental cars, activities for you.

15. Over the Top Technology
   a.   RFID Based Doggy Doors with Twitter Notification
   b.   Tooth Receiver – Listen to radios, cell phones via transmitter in your tooth
   c.   Laser keyboard
   d.   Smartphone Projector
   e.   Thin Flexible Monitors
   f.   Vein Viewer
   g.   Fish Tank Toilet
   h.   Dolphin Boat - Video

        i.   Growing Body Parts
        j.   Tandem Bike
        k.   Evian Commercial – Babies Skating

16. Television and the Web
   a. In the late nineties I publically predicted that the television and the internet would merge into one, and instead of gathering around the family TV, the family would gather around the Internet screen, and the remote control would be a keyboard. This prediction is a little late in coming, but I think that I am definitely right.
   b. Xfinity
   c. Hulu
   d. Funmoviesite

17. Microsoft Surface
   a. Microsoft Surface
   b. Paraody
   c. Newer Movie – Samsung SUR40
   d. Kiosks, Visitor Centers,
   e. Future?

18. Robotics
   a. Honda's Asimo – Still working the hugs out
   b. Reaper Drone
   c. Small dragonfly – Insect Drones

19. E-Mail Trends
   a. E-Mail use has declined 40%
   b. Texting and social networks have replaced e-mail
   c. 90% of my e-mail is junk
   d. Less than 1% of my facebook or texts are junk, I am sure that will change

20. Facebook
   a. 750 millions users
   b. One-to-many and one-to-one
   c. Privacy can be achieved, create blocked list, then prevent blocked list from viewing your wall

21. The Future of Reading the news
   a. Average age of newspaper reader is 55
   b. Newspapers subscribership is way down
   c. NYT Shares   NYT Subscribers
   d. Newsweek was sold for $1 dollar
   e. Each day AP produces thousands of news stories, who will filter those stories for you in the future?
   f. Matt Drudge? One trillion hits a year…and growing.
        i. Matt's not smart
        ii. Matt's can't write well…I've read his book.
        iii. Matt only links
   g. Digg
        i. Digg relies on public filtering
        ii. I like matt's filtering much better
   h. Huge Political Implications

22. Remote Desktop Connections
   a. GoToMyPC
   b. LogMeIn
   c. WebEx
   d. pcAnywhere
   e. Remote Desktop Connection
   f. RemotePC
   g. Citrix
   h. Terminal Services
   i. Array Networks

23. Electronic Forms:
    a. Example - GSCPA CPE Course Evaluation Forms
    b. QuickBooks
    c. InfoPath

24. Collaborative Environments:
    a. Wikis
    b. WetPaint
    c. PBWiki
    d. MediaWiki
    e. Wrike
    f. Basecamp
    g. GoogleDOCs

25. Meeting Facilitation Solutions:
    a. Participants may gather in a single room, but sit at separate terminals
    b. Participants may be located miles apart
    c. Advantages

26. Using Computers in Presentations:
    a. PowerPoint
    b. Projectors
    c. Presentation Tips

27. Pictures:
    a. Digital Photography
    b. Photoshop

28. Videos:
    a. YouTube
    b. GoogleVideos
    c. FlickR

29. Microsoft Outlook:
    a. Setup Tips
    b. Managing Groups
    c. Meeting Requests
    d. Sharing Calendars
    e. E-Mail mail Merging – Word & Outlook
    f. E-Mail Marketing
    g. E-Mail List Management

30. Secure e-Mail Solutions:
    a. Hush Mail
    b. Pretty Good privacy
    c. Secure Hive
    d. Vormetric
    e. ShyFile

31. Electronic Forms:
    a. InfoPath
    b. Web Based From Controls

32. Electronic Surveys:
    a. Zoomerang
    b. Web Monkey

33. Synchronization:
    a. Cell Phone Data to computers
    b. Synchronizing Excel Files to Your Web Site
    c. Web pages to computers

34. Hand-held communication tools
    a. iPhone
    b. Cell phones
    c. PIMs
    d. Ear Pieces

35. Contact Management Tools
    a. Personal Information Management (PIM) Tools
    b. Sales Force Automation (SFA) Tools
    c. Customer Relationship Management (CRM) tools

36. Web Site Development & Web Site Management Tools:
    a. Microsoft FrontPage
    b. Microsoft Expression Web
    c. Dreamweaver
    d. Blogging

37. Supply Chain Automation Solutions
    a. Communications between Accounting Systems
    b. Microsoft BizTalk

38. RFID Technology:
    a. Asset Tracking
    b. Inventory Management
    c. Measurement

39. Desktop Publishing:
    a. Microsoft Publisher
    b. Electronic Newsletters
    c. Electronic Marketing & Communications

40. Digital Dashboards – Windows into your accounting system and financials

41. Push Technology
    a. RSS Feeds
    b. Scheduled

How Tech Savvy are You?

Are you a technology champion or a technology laggard? Do you embrace technology or shun it? Presented below is a series of questions and explanations to help you determine how technology savvy you really are, and perhaps help you to identify where you could improve your technology performance.

1. Do you use a full sized computer, monitor and keyboard to get most of your work done (ie: do you avoid using a laptop)?

   Why this matters - A laptop computer is not an ergonomic device which makes it harder for you to be productive over extended periods of time. Your keyboard should be below located below desk height so your arms are parallel to the floor. Your monitor should be even with your eyes. This allows your head to sit up straight atop your spinal column so that your neck muscles are not fatigued throughout the day – hence you can work longer and be more productive. Likewise a full sized keyboard, especially an ergonomic one, is more comfortable and allows you to work longer hours and avoid injury such as carpel tunnel syndrome.

2. Does your computer have more than one processor chip?

   Why this matters – A fast computer waits on rather than the other way around. In the same way that a small water leak wastes thousands of gallons over the course of a year, a slow computer steals your time and productivity. For the past 4 to 5 years, newer computers have multiple processors in order to gain speed. Excel should launch in one second, documents should start printing in 3 seconds, and web pages should pop up almost immediately. Anything short of this means that you are waiting around. Just 10

minutes of lost productivity each day adds up to more than a week of lost time each year.

3. Does your computer have more than 2 gigs of RAM?

   Why this matters – Today's operating systems (such as Microsoft Windows 7) and applications need 2 gigs or more of RAM to operate fast and without glitches. Any less RAM, and you are probably encountering frustrating glitches and losing time throughout the year.

4. Are you using Windows 7 64-bit or another 64-bit operating system?

   Why this matters – For more than 15 years personal computers have employed 64-bit architecture, yet only recently have 64-bit operating systems emerged to take advantage of that power. If you are still using a 32-bit system, you are "old school" and your computer's lack of performance is hindering your productivity.

5. Do you have a flat panel monitor on your computer?

   Why this matters – The older CRT style monitors used an oscillating beam of light which shined from the back of the unit onto the monitor screen and directly into your eyes. This makes working on an older CRT hard on the eyes and hinders productivity. A flat panel monitor of 19 inches or more will be a welcome addition to your computer that will enable you to work longer without eye fatigue and possibly avoid the health risks associated with using CRT monitors.

6. Does your computer have 2 or more monitors?

   Why this matters – You need to try it to fully understand it. Having two monitors allows you to view multiple applications at the same time such as Word and Excel, e-mail and Excel, or Word and your web browser. This makes it much easier to refer to data on one screen while creating content in the other screen, cut and paste data, or monitor multiple sources of information simultaneously.

7. Do you have a printer that duplexes (prints on both sides of the paper)?

   Why this matters – You can cut your paper costs in half by printing on both sides of the paper. Storage costs are also reduced and if you ship manuals or booklets, your shipping costs will decrease as well.

8. Is your printer hooked up via a network connection (ie: not connected via printer cable)?

Why this matters – The traditional printer port on your computer is slow by today's standards. Setting your printer up as a node on the network will increase printing performance by as much as eight fold. Producing a document in 30 seconds instead of 8 minutes will make you more productive.

9. Does your e-mail address include your own domain name (ie: Not AOL, Gmail, Yahoo, or Hotmail?

   Why this matters – Your image matters. It takes only a few minutes and costs less than $30 per year to purchase a domain name and a few hundred e-mail accounts based on your company's name. This allows you to avoid using free e-mail accounts that end in AOL, Gmail, or Hotmail as your primary e-mail address. To many , the use of a free e-mail account addresses is a sure signs that you work for a "rag-tag" organization. When I see an AOL.com e-mail address, I typically assume the person to be a less sophisticated computer user.

10. Do you have a default signature block on all of your e-mails with complete contact information?

    Why this matters – If you are like most professionals, you send out thousands of e-mails each year. That said, you should not take the time to create thousands of signatures. Instead your e-mail system should insert a complete signature block for you. Further, your signature block should contain your complete contact data including company, city, state, phone, e-mail address and possibly the complete mailing address. To leave this data out is less than professional and will cause your recipient unnecessary effort should they wish to contact you or forward your contact information to a prospect or colleague.

11. Have you ever created an e-mail group (in Outlook or elsewhere)?

    Why this matters – You probably have at least one, if not several groups of people that you communicate with frequently. A list of employees, friends, members, colleagues, etc. can be set up as a single e-mail group fairly easily, and thereafter you can communicate with that group just by sending an e-mail to the group name, rather than individual e-mail addresses. It takes only a minute to set up an e-mail group which could save you a significant amount of time down the road.

12. Do you leave your e-mail up and running all the time?

    Why this matters – Your computer should wait on you, not the other way around. If you leave your computer on all the time, your e-mail reader (such as Outlook) will retrieve your e-mail every 3 minutes, and therefore your e-mail will be instantly ready to read when you are ready to read it. If you must boot up your computer, log into the Internet, launch your e-mail reader, and retrieve your e-mail messages, then checking e-mail will seem more of a chore than a useful tool.

13. Do you have more than one e-mail address (ie: one for business and one for personal)?

    Why this matters – Everybody has the need to maintain a professional e-mail address, but it is also a good idea to have a free e-mail address (from Google or Microsoft for example) to use for personal correspondence or signing up for web site passwords (like that recipe web site). This helps keep your professional e-mail from becoming a spam target; whereas if your personal e-mail is targeted, you can just drop it and get a new one.

14. Do you typically leave your computer on over night?

    Why this matters - It takes about 4 to 5 minutes to boot up a computer, launch the applications you were using the previous day, and retrieve the data files you were using. Likewise it takes 2 to 3 minutes to close applications and power down at the end of a day. This task could cost you 20 to 40 hours of wasted time each year. Instead, set up a password protected screen saver and make sure your monitor and printer shuts down automatically after 15 minutes of inactivity, but keep your computer up and running. This also allows virus checks, spam checks and backups to run in the wee hours of the night. As a bonus, your computer will always be available to you via remote access from any internet connection in the world.

15. Have you ever logged into your computer remotely?

    Why this matters – Remote access allows you to access your computer from any internet connection in the world – be it from home, a client's office or on a cruise ship half way around the world. With this technology you can check your e-mails, use your applications, and have access to all of your files via a secure connection. This also works well for remote training, troubleshooting, or for providing access to satellite locations.

16. Have you ever connected to a wireless Internet signal?

    Why this matters – The world is fast becoming one giant hot spot where you can hook into the internet from practically anywhere. Once connected you can access your computer, read the latest news, check stock prices, communicate via Voice over IP, etc. Connecting to a hot spot is usually an easy process.

17. Have you ever copy and paste-linked between two applications?

    Why this matters – It is easy to copy data and paste it into another application, and it is just as easy to paste-link that data so that when the original data changes, the destination data is updated automatically. Using the paste-link command can save you time and help you avoid errors.

18. Have you ever performed a Mail Merge to e-Mail in Word?

    Why this matters – There are numerous reasons for using mail merge. Perhaps you would like to send a personalized letter to all of your clients, produce a stack of custom contracts, or prepare an address booklet from a list or database of names. Word can extract data from a database, Outlook, Excel or other sources on a field by field basis to produce personalized letters or even personalized e-mails.

19. Have you ever created a Pivot Table in Excel?

    Why this matters - One of Excel's more powerful features is the PivotTable – but you need a heavy amount of data to fully appreciate its power. The PivotTable command can instantly convert detailed transactional type data into sleek, drillable reports. Why spend hours churning and manipulating data into a report format by sorting, moving data around, and inserting formulas when the PivotTable command can accomplish this same feat in two seconds?

20. Have you ever had your computer read to you?

    Why this matters - Your computer can read to you. In some cases it may be more productive to have your computer read you that document or e-mail so that you can multi-task while listening.

21. Have you ever created or sent an electronic survey (ie: Using InfoPath or through Zoomerang)?

    Why this matters – Not only is feedback important, it has been shown that the act of asking for feedback is also important – whether you actually receive any feedback or not. There are many survey tools that will help you create a survey, send the survey, and automatically tabulate the survey results. When was the last time you asked your clients (or employees) how well you are doing or how you could improve?

22. Have you ever searched your computer using Google Desktop or 7 Fast Find?

    Why this matters - Windows XP and older computers take forever to search your computer – but Windows 7 can find all of the files on your computer containing the word "Budget" in less than two seconds, even if there are hundreds of them. With this feature, finding that file you want is always easy. Once you have experienced this powerful search tool, you'll never again use the old search tools.

23. Do you filter your Internet searches?

Why this matters – Most search engines (such as Google) allow you to turn on filters to block inappropriate web sites. Using these filters will help you find the information you are seeking faster and will help you avoid distractions and inappropriate sites.

24. Do you have high speed internet?

Why this matters – The Internet represents the greatest opportunity to small business since the Renaissance. If you are surfing the Internet at slower speeds, then the Internet will seem more of a pain that a tool. Your computer should display web pages in about 2 seconds or less. Using dial up or slow internet access is like preparing a lengthy tax return by hand – they are both inefficient by today's standards.

25. Do you produce your business and personal checks on a computer (ie: don't write them by hand)?

Why this matters – Are you still writing manual checks? Why? There are many tools, (including free tools like Microsoft Office Accounting Express) that will print the checks for you and each time you print a check your general ledger and income statement is updated. I pay my personal bills each month in about 6 minutes, how long does it take you? Whether for business or personal, manual checks will eat your time.

26. Do you have at least one social network set up (Linked In, FaceBook, Plaxo, MySpace, Twitter)?

Why this matters – Who you know does matter – right? Social networks help you maintain your relationships be them business, personal, or casual. Linked-In is geared more for business relationships whereas FaceBook is geared more as a social tool that helps you maintain more personal relationships – but they both work well helping you keep track of all the people you know that might enrich your life professionally or personally.

27. Have you ever printed out driving directions from Google Maps, Map Blast, or similar web site?

Why this matters – Getting lost wastes time, wastes gasoline, pollutes the atmosphere, and makes you late to the event. Internet based map tools can provide excellent driving directions that will prevent you from getting lost and hearing your spouse say "I told you so!"

28. Do you read frequently on the internet?

Why this matters – The bulk of the information that is printed in newspapers and delivered on television shows up on the Internet days earlier. There are thousands of web

sites you might read to stay current, but free sites like the AP Wire online and Digg.com will keep you well-informed.

29. Have you ever made a Skype phone call?

Why this matters – Voice over IP is now 20+ years old and is better than ever. You can call any computer in the world free of charge, or call any cell phone or land line in the world for a couple of pennies per minute. One cell phone call from Europe to the United States might cost you $50 – but that same Skype call will costs less than twenty-five cents.

30. Have you ever published a web page to the Internet?

Why this matters - There are billions of web pages out there – many of them obviously published by complete idiots - therefore you know that it must be easy – right? It is time for you to publish your own pages to the web. Pick your interest or expertise, write about it and publish it. If your content is useful or interesting to others you may attract interested parties to collaborate with, or customers to hire your services. Hint: In Word select "File, Save As A Web Page…"

31. Do you have a decent web site (ie: fair substantial, not lame)?

Why this matters – The internet reaches out to more than a billion people in the world and costs practically nothing to create. Why wouldn't you utilize this medium?

32. Have you ever visited your State's camera based traffic web site?

Why this matters – Most states and major cities display online road maps with live speed feeds, camera shots, and accident reports which can help you plot your trip and avoid heavy traffic.

33. Have you ever shopped for and purchased an item over the Internet?

Why this matters – Virtually everything in the world is 20% to 25% cheaper when purchased over the Internet. Further, the Internet typically provides detail explanations, pictures, video clips, schematics, etc. to help you become more knowledgeable before you purchase. Unless I planned to eat it right away, virtually all of my purchases since 1996 have been made through the Internet.

34. Do you keep your contacts, calendar, and to do list electronically (ie: in Outlook, not on paper)?

Why this matters - The three most important things to CPAs are their contacts, their calendar, and their To-Do lists. Maintaining these items electronically allows you many

advantages. For example, calendars are updated automatically when you accept meeting requests via e-mail. Calendars can be shared with one another. Calendars can be overlaid with other calendars to identify mutually available time slots. Contacts can be automatically updated via Plaxo. To-Dos items can be linked to time sheets. Most computer-based day planners will print paper versions that fit into the paper based day planner binders.

35. Do you carry a cell phone so that you are reachable?

    Why this matters – Business never stops. Emergencies happen. Sometimes you are needed right away and a cell phone can make you the "hero" instead of a "zero".

36. Do you text on your cell phone?

    Why this matters – Texting is like e-mail in your pocket. People can reach you and you can reach them anytime, anywhere without interrupting. Texting also creates a permanent record that voice calls do not.

37. Have you ever synced a handheld device or cell phone to your computer before?

    Why this matters – Entering large amounts of names and phone numbers into a cell phone is difficult and time consuming. Enter this information into Outlook instead, and the information will flow right into your cell phone via simple cable connection. Thereafter an occasional quick connection will transfer newly entered data from your phone to your computer, and vice versa so both devices have up to date data. Cell phones do become lost or stolen therefore backing up your information is a good idea.

38. Do you have a cell phone ear piece or head set?

    Why this matters – Multi-tasking increases your productivity and an ear piece enables you to talk on the phone with your hands free. A hands free ear piece makes driving safer as well.

39. Do you have wireless internet running in your office, home, or both?

    Why this matters – There is no longer a need to be tethered to the wall by a cable. Wireless technology allows you to network with other computers, print, and surf the Internet from anywhere in your office or home. This also saves money by eliminating the need to purchase cables, hubs and routers.

40. Have you set up encryption on your wireless router?

    Why this matters – Installing a wireless router is like running a network cable out to the street so strangers can plug into your network. Setting up wireless encryption will solve

this problem and it takes only a couple of minutes. Simply launch a browser and type the IP address that appears on the bottom of the router. This will enable you to turn on WPA encryption and assign a password. You will need to use this password the first time you through your computer, but afterwards your computer remembers the password and the connection will be automatic – and safe from strangers.

41. Have you ever used a GPS system to find your way when driving?

    Why this matters – A GPS system not only gives you turn by turn directions to prevent you from getting lost, it also points you to restaurants, gasoline stations, and other services close to you.

42. Have you ever used a video projector before in a business situation?

    Why this matters – CPAs work with data, and ultimately that data needs to be delivered. In many cases the use of a full color projection system will help the CPA deliver that data and make the key points in a more informative and professional manner.

43. Have you ever burned a CD?

    Why this matters – Sharing data, or saving data is a fact of computers. Burning data to a CD represents an inexpensive way to share, back up, or manage data.

44. Have you ever used a USB thumb drive?

    Why this matters – Floppy disks are extinct; they have been replaced by USB thumb drives which can hold up to 20 gigabytes or more of data.

45. Is your computer protected by a UPS device?

    Why this matters – Power surges and power outages happen. A UPS device can keep the power up long enough to protect your computer against spikes and power surges, and will give you adequate time to power down your computer if the electricity is out for an extended period of time. Without a UPS, your computer and hard drive could be zapped at any time.

46. Have you ever password protected a Word document, Excel file, or Adobe acrobat PDF file?

    Why this matters – Some data is mission critical and needs to be protected. Almost every application provides the ability to password protect a file. Make sure to use the 128-bit encryption option as 40-bit encryption is not strong enough.

47. Have you encrypted your data folder or computer hard drive?

Why this matters – The data on a lost or stolen computer can easily be retrieved, even if a computer bios or Windows password is used. To absolutely protect data on a lost or stolen computer, you must encrypt that data. Windows XP Professional and Windows 7 Professional allow you to encrypt a file, folder, or entire hard drive in less than 5 seconds. With this level of protection, your data is absolutely safe even if the computer is lost stolen, (assuming the password you used to encrypt that file, folder or hard drive is strong).

48. Do you maintain regular offsite back up of your data files?

    Why this matters – Like insurance, you hope that all back up efforts are a complete waste of time – but just in case the worst happens (such as a fire), you need to maintain a current backup of your data off site.

49. Have you backed up your entire computer in the past year?

    Why this matters – It is not enough to back up your data, you should also back up your entire computer periodically to preserve applications, e-mails, e-mail settings, etc as well as data files.

50. Do you remove the hard drives before disposing of computers?

    Why this matters – Old computers, cell phones, and hand-held devices often have data left behind that hackers can exploit. Don't take a chance, remove the hard drives before disposal and either lock them away or smash them with a hammer. Or you could use a Rocket Fish device to convert that old drive into a useful USB drive.

Give yourself 2 points for each Yes answer. Use the following grading system to determine how tech savvy you are.

A 90 to 100	B 80 to 90
C 70 to 79	D 60 to 69
E 50 to 59	F Below 50

How well did you do? I admit that technology will always frustrate you to some degree, but in the end the benefits derived from technology far outweigh any minor frustrations and pains that accompany those new technologies. All it takes is a little effort and a good attitude to transform oneself from a "computer loser" into a "computer user".

Bio for J. Carlton Collins, CPA

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J. Carlton Collins, CPA is a Certified Public Accountant with experience in technology, tax, auditing, accounting systems, financial reporting, and bond financing. He is an author, lecturer, and technology & accounting systems consultant. He has published books, articles, and web pages and is the author of the monthly technology Q&A column for the Journal of Accountancy. As a public speaker, Mr. Collins has delivered more than 2,000 lectures in 44 states and 5 countries addressing more than 500,000 CPAs and business professionals. As a consultant, Mr. Collins has assisted 275+ large and small companies with the selection and implementation of accounting systems. Mr. Collins has a Bachelor's degree in Accounting from the University of Georgia, is a 25+ year member of the American Institute of CPAs and the Georgia Society of CPAs, and is also a licensed realtor.

Summary of Selected Positions, Awards & Accomplishments:

1. Honored as one of the CPA Industries Top 25 Thought Leaders by CPA Technology Advisor Magazine
2. Author of the monthly Technology Q&A column for the Journal of Accountancy.
3. Recipient of the AICPA's Lifetime Technical Contribution to the CPA Profession Award.
4. Chairman of the Southeast Accounting Show - the South's largest CPA event.
5. Recipient of the Tom Radcliff Outstanding Discussion Leader Award.
6. Named "Top Ten CPA Technologists" by Accounting Technologies Magazine (multiple years).
7. Named "Top 100 Most Influential CPAs " by Accounting Technologies Magazine (multiple years).
8. Has personally delivered over 2,000 technology lectures around the world.
9. Recipient of the Outstanding Discussion Leader Award from the Georgia Society of CPAs.
10. Lead author for PPC's Guide to Installing Microcomputer Accounting Systems.
11. Has installed accounting systems for more than 200 companies.
12. Chairperson of the AICPA Technology Conference.
13. Recipient of the ACCPAC Partner of the Year Award.
14. Determined by SAP to be one of the country's "Top Ten Most Influential ERP Systems Consultants".
15. Has delivered keynote and session lectures at dozens of accounting software conferences.
16. Sworn in as a Certified Public Accountant on September 18, 1985.
17. Member of the American Institute of CPAs since 1985.
18. Member of the Georgia Society of CPAs since 1982.

As an auditor, Mr. Collins has audited businesses in the areas of health care, construction, distribution, automobile dealerships, insurance, manufacturing, and general business. Mr. Collins' tax experience includes corporate, individual, partnership, fiduciary, and estate tax planning work. In the area of finance, Mr. Collins has prepared (or assisted in preparing) feasibility studies and financial forecasts for nearly 300 projects seeking more than $3 billion in startup capital. Mr. Collins is familiar with bond issues, Medicare and Medicaid reimbursement, and conventional financing matters. In 1992, Mr. Collins contributed and demonstrated more than 500 pages of suggested design improvements to the Microsoft Excel development team of programmers - and many of those improvements are found in Excel today.

At the University of Georgia, Mr. Collins was elected President of the Phi Eta Sigma Honor Society, was initiated into the BIFTAD Honor Society, served three years in the Judicial Defender/Advocate program, and was a member of Alpha Tau Omega fraternity. At Glynn Academy High School, Mr. Collins was Senior Class President, Class Valedictorian (1 of 6), and received a principle nomination to Annapolis Naval Academy. Mr. Collins has been married for 27 years and has two children. He devotes his leisure time to family, travel, tennis, fishing, snow skiing, and riding motorcycles (both dirt and street). Mr. Collins is president of his homeowners association, participates in the Gwinnett Clean and Beautiful program, and volunteers for Cooperative Ministries food drive.