

CONGRATULATIONS
IMA CLEVELAND EAST
CHAPTER!

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2014-2015 Awards

1st Place Chapter Competition

Outstanding level of service









BOARD MEETING
TUESDAY, MAY 10 2016
Details on website

May 17 Technical meeting

FINANCIAL ACCOUNTING UPDATE

Speakers:

Ray Boylan and David Cahill, Cohen & Co.

FAST-FORWARD IMA'S ANNUAL CONFERENCE ACE 16



Use Your Skull As Your Password!

Passwords can be maddening. To be secure, they have to be long, alphanumeric, and include capital and lowercase letters, numbers, and other odd keyboard symbols—all of which makes them very difficult to remember. But now, in the field of biometrics, scientists and security experts have developed a new personalized system of identity verification. Instead of using your brain to generate and remember your ID, they suggest you use the box it came in—your skull.















May Technical Meeting

May 17, 2016

Financial Accounting Update Presented by:



Ryan Boylan graduated Ohio University with a bachelor of Arts in Accounting and Business Law. Ryan is a senior in the Cohen Audit and Attestation department, providing financial statement audits, reviews, compilations, and various agreed upon procedure engagements to his client base. Ryan is a trusted advisor from financial, strategic, and operational avenues and is dedicated to providing value added services to his clients through strengthening their internal control environment, advising accounting personnel on best practices related to financial reporting processes, and preparing clients for relevant changes to reporting standards. Ryan primarily serves the manufacturing, distribution, professional services, and tax credit fund industries. Ryan is also a member of the Ohio Society of Certified Public Accountants, a member of the American Institute of Certified Public Accountants, a finance committee member for Walsh Jesuit High School, and the treasurer of the Board for Greater Cleveland Neighborhood Centers Association.



David Cahill graduated from the University of Dayton with a Major in Accounting, Minor in Finance, and MBA in 2013. He is a senior in the Auditing and Attestation department of Cohen and Company, focusing on Not-For-Profit, Construction, Manufacturing, and Software clients. David is a member of the Ohio Society of CPA's and the American Institute of Certified Public Accountants. Currently, David is a board member and program day chair for the Learning About Business not-for-profit located in Painesville, OH.

MEETING LOCATION

Hilton Garden Inn 700 Beta Drive Mayfield Heights, OH (I-271 Wilson Mills Exit)

Cost of Meeting (1 CPE) & Dinner for

Members and Non Members \$25,

Students \$10
Register at:
www.cleveast.imanet.org





Dilliner Dane

Dinner Salad

Rolls & Butter

Chefs Choice, Two Entree Buffet

Beef or Chicken)

des (1 Vegetable & 1 Starch) Complimenting Main Entree Optio

Chef's Choice Dessert

Fountain Soda, Iced Tea, Water and Coffee

Cash bar adjacent to the meeting roon



Cleveland East Chapter

PRESIDENT'S MESSAGE



The IMA Chapter year is wrapping up at the end of the May and with its ending comes summer in Cleveland. I have been trying not to complain about spring taking its time and being temperamental this year because our winter wasn't that bad but enough already; COME ON CONSISTENT SPRING WEATHER!

Thank you to those that attended the Meonske Conference. It was a great two days of CPE. If your membership for the IMA is coming up make sure that you look for the discount code provided with your materials for 15% off. I also want to thank Robin Schade and Sandy Brenner who both serve on our Cleveland East Chapter and the Meonske Conference Committee. They are an integral part of putting on a top ranked national accounting conference. We are so blessed to have their talents at the Cleveland East Chapter.

Continuing on the CPE front; we had Frank Suponcic from Skoda Minotti give a wonderful presentation on Identity Theft (prevention not how to pull it off!). That was a great way to get an hour of CPE. On May 17th we will have David Cahill and Ryan Boylan from Cohen & Company present a financial accounting update. This meeting will be held at the Hilton Garden Inn. We look forward to seeing you there!

I hope everyone has a safe and happy Memorial Day!

Please register at:

http://cleveast.imanet.org/technicalmeetingregistration.html.



SPONSORS

We would like to thank the following organizations for their support in

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sponsoring the IMA Cleveland East Chapter.

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Sandra Brenner at (216)839-7288 or Email: sandra.brenner@basf.com.





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Carlos M. Chavez, MBA, MSA Owner

909 Quincy Court Medina, Ohio 44256 Telephone: (330)723-0559 Celt (216)470-4450 Email: cmchavezassoc@oo.

Deadline for submitting information for next newsletter is the Monday following the technical meeting. Send your submissions to Carol Kuczer at: ckuczer@ddr.com





Monthly Access A Publication of the Cleveland East Chapter

Annual Leadership Training Workshop

Dear Chapter Officers,

I'm very excited to tell you about this year's annual Leadership Training Workshop (LTW). The program is designed for all chapter board officers both new and seasoned. We have a tremendous event planned for you this year. The program is designed to help you to "Get Your IMA Game On" as chapter officers.

Friday, May 13th - Board Meeting and Team Building Event

Location – SuperGames 535 Lakeview Plaza Blvd. Worthington, OH 43085



Ohio Council Meeting – 4:00 PM - All Ohio Council Board members and Incoming chapter board members are welcome to participate. *Casual dress.*

Dinner & Team Building Event - 6 PM – 8:30 PM - Join us for a fun evening of networking and team building. We will be competing in Survivor Games! We have as our special guest this evening the Columbus Chapter of IMA. *Casual dress*.

Ohio Council Board Members and Ohio IMA Chapter Members – No cost – Guests \$75 per person

Saturday, May 14th – Leadership Training Workshop

Location – Nationwide Hotel & Conference Center Nationwide Hotel & Conference Center 100 Green Meadows Drive South Lewis Center, OH 43035

8 – 8:30 Continental Breakfast 8:30 – 2:00 LTW Program Business casual dress



A room hotel block has been secured at **Nationwide Hotel & Conference Center** 100 Green Meadows Drive South Lewis Center, OH 43035- (614) 880-4300. Please make your hotel reservation early, as space is limited. You will be responsible for your hotel bills. *Deadline for reservations is Friday, April 29th.* Room rate is \$129 per night single, \$139 double plus taxes. To make hotel reservations, call (866) 233-9393. Must indicate you are with the **Institute of Management Accountants** when making reservation.

If you have any questions, please contact me Sandy Brenner at sandra.brenner@basf.com or 216-839-7288.





ANNUAL CONFERENCE



JOIN US FOR THE 2016 IMA'S ANNUAL CONFERENCE & EXPO IN LAS VEGAS, NEVADA

Register Now at imaconference.org









2015-2016 BOARD OF DIRECTORS

Cleveland

Chapter

East

Office	Name	Email	Telephone
President	Brian Fehribach	brian.fehribach@imcdus.com	(216) 228-8900 x272
Secretary	Enrico Varricchio emdnv@oh.rr.com (216) 475-878		(216) 475-8787
Treasurer	Robin Schade robin.schade@imcduc.com (216) 228-8900 x2		(216) 228-8900 x262
VP Administration	Brandon Coates bcoates@cohencpa.com (419) 494-944		(419) 494-9445
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Chair of the Audit	Vince Pona	vpona@millrose.com	(440) 347-1139

Need extra help with special projects?

Want to give a helping hand to an accounting student?

Interns are available to help your company. Both the University of Akron and Hiram College have accounting students that are ready, willing and eager to gain real life experience.

For more information, please contact Robin Schade at 216.227.3011 or via email at robin.schade@imcdus.com.



IMA GLOBAL CORE VALUES

Respect for the Individual

We treat each other with respect and dignity, valuing individual and cultural differences. We communicate frequently and with candor, engaging in healthy debate and listening to each other, regardless of position or level. We work hard to create an environment that respects individuals in an atmosphere of open communication, growth, and learning.

Passion for Serving Members

We enable individuals to use their capabilities to the fullest to deliver exemplary products and services to members. That enablement extends to being passionate advocates in advancing our global profession. We care for all members and each other - building enduring relationships and driving continuous improvement. We appropriately recognize our volunteer leaders, who are so giving of their time and expertise.

Highest Standards of Integrity and Trust

We understand and abide by the IMA Statement of Ethical Professional Practice in our everyday actions. Our personal conduct ensures that the IMA name is always worthy of trust - our members around the globe deserve nothing less. We treat each other fairly, keep our promises, make decisions objectively, take responsibility for our actions, and admit our mistakes. We maintain confidentiality as appropriate.

Innovation and Continuous Improvement

We believe innovation and a spirit of continuous improvement are engines that keep us relevant, vital, and growing. Our culture embraces creativity and seeks different perspectives. We behave like owners of a "business," managing risks and identifying new opportunities in serving members and advancing the profession.

Teaming to Achieve

We encourage and reward both individual and team achievements, proactively working across organizational boundaries to always "remember the member." Our spirit of team achievement extends to advancing our professional and to being responsible and caring partners within our various communities.



Cleveland East Chapter

2015 - 2016 **TECHNICAL MEETINGS**



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Date	Time	Event
Tuesday, August 25, 2015	6:00 PM	Accounting for a baseball team - Captains game 7PM at Classic Park, Eastlake
September 15, 2015	6:00 PM	Internet Security
October 20, 2015	6:00 PM	Student Night
Friday, November 20, 2015	8:00 AM - 5PM	Controllers' Workshop
January 19, 2016	6:00 PM	Economic Update
February 1 6 , 2016	6:00 p.m.	Tax Update
March 15, 2016	6:00 p.m.	Ben Mulling, Chairman 2015 - 2016 IMA global board of directors
April 19, 2016	6:00 p.m.	ID Theft
May 17, 2016	6:00 p.m.	Financial accounting update
		2016 Seminars
Thursday, April 28, 2016	8AM - 5PM	Annual Meonske Conference Pre-Conference Workshop
Friday, April 29, 2016	8AM - 5PM	Annual Meonske Conference

Cleveland East Chapter Anniversaries

Years **Members**

- 57 Richard Kavicky
- Sandra Rhea 14
- 14 Lu Yu
- 7 William Brandon
- 6 Claressa Collins
- 2 Frank Klaus
- 1 Mark Wolinsky





DETROIT | NOV. 10-12, 2016





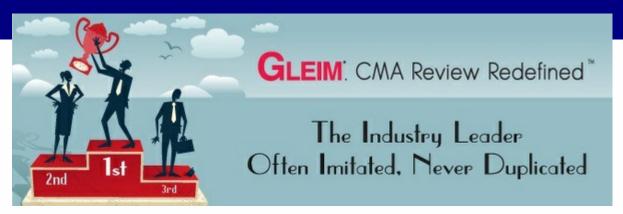


REGISTRATION OPENS SEPTEMBER 6, 2016









More CMA Medal Winners Pass With Gleim

How far can you go with Gleim? All the way to the top! The Gleim CMA Review System sets candidates up to excel on the CMA Exam and pass quickly. Our world-class materials enable CMA Exam candidates to efficiently secure a solid grasp of the topics tested so that they are able to pass both parts of the exam in one testing window -- setting them up to achieve Gold status!

Nicolas Lehmann of Switzerland got a great boost in his accounting career when he used Gleim to win the ICMA Gold Medal for the highest exam score.

"In the CMA exam window September/October 2014, I achieved the highest score out of all test takers. The foundations of this result were a thorough understanding of the topics as well as practice in tackling the multiplechoice questions. In both areas, Gleim products were perfectly useful to me.

"With the books, I got general information about the exam as well as specific exam-taking strategies. Furthermore, the content was easy to learn given the well-outlined units with definitions, explanations, sample questions, and sample essays. The books helped me to get a complete grasp of the CMA curriculum.

"To get practice when it comes to solving multiple-choice questions, I used the Gleim CMA Test Prep. The Test Prep. emulates the Prometric testing environment very well. This helped me to feel comfortable during the two exams. Additionally, the Gleim Test Prep is packed with an enormous amount of questions about every subject. And with the performance analyses, it showed me in which subjects I was performing well and where some additional effort was needed

"Overall, I was very happy to use the Gleim materials during my preparation for the CMA exam, and I believe they were key to my excellent result. I can highly recommend the Gleim products to every person who is preparing for the CMA exam."

Join Nicolas and the many others who have claimed CMA gold with Gleim. Get unlimited access to an entire Study Unit of our CMA Course for free today.



Gleim Publications, Inc. 4201 NW 95th Blvd. Gainesville, FL 32606 800.874.5346



THINGS TO CONSIDER ABOUT CMA CERTIFICATION



Cleveland East Chapter Gleim IMA Chapter Partnership

Cleveland East Chapter members receive a significant discount off all Gleim CMA and CPE study materials including the new ethics course. Your Cleveland East IMA Chapter has partnered with Gleim to ensure your success on the CMA exam! Working together, we will provide you the necessary study tools to prepare for this difficult exam. Gleim has been preparing candidates for success with their extensive self-study course for over 30 years! The Gleim Review System enables you to identify your weak areas so you know where to focus your efforts and GUARANTEES that you will pass each exam part the first time. Our goal is that you achieve success while minimizing your frustration, cost, and time. As a member of the chapter, you are eligible for significant discounts on any of Gleim's CMA materials, as well as Gleim CPE.

To learn more about the program, or to print order forms, visit the Cleveland East Chapter website.

Gleim is excited to partner with Tri-C Corporate College to offer a live review for the Certified Public Accountant exam. This review will be held at the Corporate College East campus with weekly sessions specifically designed to help you pass the exam quickly and effectively.

This offering is unique in terms of its affordability and the one-on-one attention you will receive. These review courses provide candidates with the tools, information, and knowledge necessary to pass the CPA exam the first time.

If you are a candidate who wants to pass the CPA exam quickly and appreciates the added value of a live instructor, call Sheryl Hunt today at (216) 987-0233 or email sheryl.hunt@tri-c.edu to register. You can also check out their CPA web page for more information.

Class size is limited, so register NOW to reserve your seat.



Salary

Findings of IMA's 20th Annual Salary Survey indicate that professionals holding IMA's CMA certification have greater earning power - 24% higher in salary and 31% higher in total compensation - than their non-certified colleagues. These findings appear in the June 2009 issue of IMA's <u>Strategic Finance</u> magazine.

Competitive Advantage

Businesses around the world rely on CMAs for accounting, finance and information management and most importantly, for the strategic planning and business solutions provided by these qualified professionals. Companies such as 3M, Boeing, DaimlerChrysler, DuPont, Hewlett-Packard, IBM, Johnson & Johnson, Milliken and Procter & Gamble recognize that employing CMAs helps to improve company performance in aggressive global business arena.



Review Schedule Based on Gleim Publications Corporate College:

- For the CMA Exam the review for each part of the exam is about six weeks.
- The class meets initially for a 1-hour orientation.
- 5 more meetings, one a week, for 3 hours each.
- Students will take the exam part covered by the review within 2 weeks of the last live class.
- The review for each successive exam part begins 1 to 2 weeks after the review for the previous parts ends.

Personal Satisfaction

Prove your ability to become a strategic business partner, while you also enhance your self-confidence, your sense of accomplishment, and your resume.

Professional Recognition

The CMA designation represents a broad business competency and mastery of the management-level skills required to add value, drive business performance, and build quality financial practices within organizations. The program objectively tests and validate expertise in areas essential to analyzing, managing and evaluating business solutions that contribute to the success of an organization. The CMA credential indicates a commitment to excellence based on a strong, ethical foundation and dedication to lifelong learning.

Start On Your Road to CMA Certification Now!







exciting updates to the Gleim CMA Review course. The CMA Gleim Online course has been expanded with more multiple-choice questions, essays, and updates to the digital book. For the first time ever, Gleim has included supplemental videos in the online course, which feature Dr. Passard Dean, CMA.

Save 15% on the newly updated Gleim CMA Review System.

Over 150 new multiple-choice questions are now available in Gleim CMA Review, which includes the largest test bank in the industry. There are now over 3,100 ICMA-released and expertly authored questions in Gleim Test Prep. CMA candidates will also notice new functionality within Test Prep. While working in Gleim Study Sessions within Test Prep, candidates can now open and reference the digital book while answering questions. This functionality is particularly useful if candidates are frequently missing questions or need more clarification on certain topics.

The Gleim CMA Review System also now features 20% more essays. CMA candidates can practice answering exam-emulating essays in the Gleim Online Course and in the Gleim Essay Wizard.

Supplemental videos, featuring Dr. Passard Dean, CMA and Professor of Accounting at St. Leo University, will be available in the Gleim Online course starting in early April . These videos feature detailed walk-throughs of the multiple-choice questions that candidates find to be the most difficult. <u>Click here</u> to see a sample of the type of videos that will be added to the Gleim Online course.

Updates have been made to the Gleim CMA Review digital book to include improvements based on candidate feedback as well as more elaboration on key topics. The Gleim materials are written by professional educators, Dr. Gleim and Dr. Flesher, who have over six decades of combined teaching experience. Dr. Gleim was recently recognized by the Fisher School of Accounting at the University of Florida, a top ten accounting school, for his "renowned accounting [materials] that to this day are the field's authoritative learning resource."

<u>Click here</u> to learn more about Gleim CMA Review's newly updated materials and save 15% now, or you can try the course for free here.

We look forward to helping you pass the CMA Exam.

Team Gleim

800.874.5346

accountingteam@gleim.com

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Be sure to read this month's news from accountemps:

"The Nonmonetary Perks Workers Want"

www.cleveast.imanet.org/partners/accountempsMay2016.pdf

Download your Salary Guide now!

You can also visit our Salary Center to order a free printed copy, review hiring trends or calculate local compensation ranges.



Advancing the Profession

IMA is dedicated to rebalancing the accountancy profession by educating society regarding the business building role of management accountants and finance professionals working inside organizations.

Certified Management Accountant (CMA ${}^{\circledR}$) - The Gold Standard

Join a leading group of professionals who have advanced beyond the practical accounting skill set by earning IMA's prestigious global certification, the Certified Management Accountant (CMA®).

Evolve into a strategic business partner committed to a standard of excellence grounded on a strong ethical foundation and a lifelong commitment to learning.

Position yourself for career advancement and greater earning power. Gain a significant competitive advantage while demonstrating accounting, finance, information management and strategic planning skills necessary to drive business performance in the changing global economy.



VISION STATEMENT

The world's leading association for management accounting and finance professionals.

MISSION STATEMENT

To provide a dynamic forum for management accounting and finance professionals to develop and advance their careers through certification, research and practice development, education, networking, and the advocacy of the highest ethical and professional practices.



The Association of Accountants and Financial Professionals in Business

IMA NATIONAL

PUBLICATIONS

Strategic Finance

IMA's flagship publication is an awardwinning monthly magazine that provides the latest information about practices and trends in finance, accounting, and information management.

Management Accounting Quarterly

MAQ is a quarterly, refereed online journal that contains in-depth articles by and for academics and practitioners of accounting and financial management.

IMA Educational Case Journal

The IECJ® is a quarterly, online journal whose mission is to publish teaching cases in management accounting and related fields.

PROGRAMS

Educator Resources

IMA provides special tools and resources for the professionals who are developing the industry's future leaders. Academic members have access to IMA's ethics curriculum, case studies, webinars, research grants, mentor program, and many other teaching resources.

Leadership Academy

The IMA Leadership Academy is designed to assess your leadership status, enhance your skills and recognize your leadership achievements.

IMA Webinars

IMA's Inside Talk Webinar Series is a highly popular monthly webinar series that explores relevant topics from your professional and delivers timely information to broaden your knowledge and improve your performance.

NETWORKING

LinkUp IMA

The online professional network created exclusively for IMA members allows you to participate in groups related to topc areas or industries, IMA regional chapters and councils, subject matter and CMA study groups. You can post announcements and events, utilize share workspaces, find jobs and more.

Linkedin

Strengthens and extends your existing network of trusted contacts. It is a networking tool that helps you discover inside connections to re-connect with colleagues and classmates, power your career and get answers

IMA's mission is to provide a forum for research, practice development, education, knowledge sharing, and the advocacy of the highest ethical and best business practices in management accounting and finance.

We do this by:

- Offering a rigorous, highly respected credential - the CMA - that recognizes and rewards expertise
- Building a peer network of professional relationships to share industry experience, access career opportunities, and make business contacts to last a lifetime
- Providing extensive education programs to advance professional knowledge, increase leadership potential, and satisfy requirements
- Giving a voice to the profession with insightful and timely journals and newsletters
- Promoting leading-edge research and industry best practices
- Advocating for the profession in a challenging regulatory environment

IMA currently represents more than 60,000 accountants and financial professionals in business. participation of each of our members makes the success of our mission possible.

KEY CONTACTS

Wore Giotta.

Community Relations Associate of East Coast Chapters

10 Paragon Drive

Montvale, NJ 07645-1718

Telephone (800)638-4427

Email: WGiotta@imanet.org

IMA Website: www.imanet.org

Power Your Potential

IMA is the resource for developing. certifying, and connecting the world's best accountants and financial professionals working in business.

What is management accounting?

.Did you know that many accounting grads begin their careers in public accounting firms, but the majority of those leave in just a few years?

The fact is nearly 75% of financial professionals work in business as management accountants: financial analysts, controllers, treasurers, and chief financial officers. Management accountants provide critical insights on ethical and regulatory requirements and are integral to business strategy and decision-making. Gain leadership experience, explore your future career options, and build your résumé and professional network. With the right preparation and training, you will be equipped with real-world competencies that will make you ready for the challenges you'll face immediately on the job.

Membership Benefits

- Differentiate yourself by taking the CMA exam while still in school
- Develop leadership skills to build your résumé
- Enjoy all member benefits at a significantly reduced rate

Student Testimonial

"I knew I wanted to major in accounting, and I wanted to make a difference, but I just didn't know how to build on that. That's how I knew I wanted to start a student chapter on my campus." - Kevin Cornwell, President, University of Texas at Dallas Student Chapter

Continuing Professional Education



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GLEIM

New courses included in the Gleim Online CPE

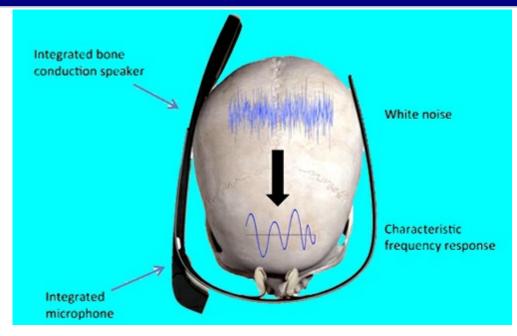
- Accounting for Investments
- Accounting for Property, Plant, and Equipment
- Adjustments to Income Tax Liability: Credits, Alternative Minimum Tax, FICA (2015)
- Audit Evidence: Applications
- Calculating Tax Liability for C Corporations (2015)
- Choosing the Best Entity for a New Business
- Compilation of Financial Statements -- Clarified Standards
- Corporate: S Corporation Formation and Operation (2015)
- Corporate: Taxable Income (2015)
- Cost Accumulation Systems -- Traditional
- Estates, Trusts, and Wealth Transfer (2015)
- Ethics for Tax Practitioners
- Financial Statements: Disclosures
- Fraud and the Sarbanes-Oxley Act
- High-Income Employees: Highly Compensated Employees Hot Spots
- Hot Topics for Landlords: Residential Property Investors (2015)
- Individual: Above-the-Line Deductions and Losses (2015)
- Individual: Accounting Methods, Filing Status, and Personal Exemptions (2015)
- Individual: Business Expenses/Losses (2015)
- Individual: Exclusions from GI (2015)
- Individual: Gross Income (2015)
- Internal Control: Basic Concepts for the External Auditor
- Introduction to Financial Statement Analysis
- Leases
- Limited Liability Companies
- Payroll (2015)
- Reporting Income from Debt Cancelation
- Review of Financial Statements -- Clarified Statements
- Saving Your Clients Money and Getting Repeat Business: Tax Planning (2015)
- Schedule C Hot Spots: Sole Proprietors (2015)
- Self-Employed Payroll Hot Spots: S Corporation and LLC Compensation (2015)
- Staying Current with Tax Laws: Federal Tax Update (2015)
- Tax Procedures (2015)
- Valuing Inventory to Avoid Poor Pricing Decisions
- What You Need to Know about Tangible Property Changes: Final Tangible Property Regulations (2015)

View these new courses as well as our entire listing of over 75 courses including those which cover Accounting, Auditing, Regulatory Ethics, Management, Business Law, and Taxation at http://www.gleim.com/accounting/cpe.

Please contact Debbie Martin, CPE Administrator to take advantage of a special offer off the regular price of our CPE packages.



Strategic Technotes Michael Castelluccio Technology Editor



Passwords can be maddening. To be secure, not only do they have to be long and alphanumeric, but they must include capital and lowercase letters, numbers, and other odd keyboard symbols and should not contain any words found in the dictionary. All of which makes them very difficult to remember. Compound that with the constant warning against using one password for many sites or accounts, and the grimace tightens.

As an example, ask your Wolfram Password Generator app for a new secret moniker for an online account. I just did that, and it gave

me this: >z8zuC(r@1*7+HC. (I'm not making this up.) It's 15 characters and very strong, and Wolfram's algorithm tells me that the time to enumerate this password (i.e., crack by random trials) is approximately 125.3 quadrillion years (at 100,000 passwords per second). That's great—it almost justifies the effort it would take to memorize this little mess. The perfect solution to achieve security: an uncrackable key from an App Store program.

But not really, and that's the other half of the password aggravation. You set up your new password for the account, but in order to authenticate your next trip there, that account must keep a copy of your password to check against what you're typing when you try to get in. What if their log of passwords is hacked or is leaked by a disgruntled employee? Well, that wouldn't take 125.3 quadrillion years.

Hence the appeal of biometric keys. As Apple marketing reassures, "The password is you." Your fingerprint activates the Touch ID, and the system only taxes your ability to remember which finger you registered. The ubiquitous cameras on computers can register an image of your face, which can become your password in some systems. And for locked rooms in more secure locations, scans of your retina or circulation patterns in your hand can be read to authenticate you.

SKULLCONDUCT

In the field of biometrics, Stefan Schneegass (University of Stuttgart), Youssef Oualil (Saarland University), and Andreas Bulling (Max Planck Institute for Informatics) have been working on a new personalized system of identity verification. Instead of using your brain to generate and remember your ID, they suggest you use the box it came in.

The three researchers call their system SkullConduct, "a biometric system that uses bone conduction of sound through the user's skull as well as a microphone readily integrated into many...devices, such as Google Glass (or virtual reality goggles)."



Strategic Technotes Michael Castelluccio Technology Editor

The three researchers call their system SkullConduct, "a biometric system that uses bone conduction of sound through the user's skull as well as a microphone readily integrated into many...devices, such as Google Glass (or virtual reality goggles)." Their tests have shown that the frequency pattern created by inducing an audio signal (white noise) into the user's skull via a bone conduction speaker is both unique and robust. The pattern is distinctive and repeatable as you put the headset on, take it off, and replace it again. Here's how it works.

The characteristic frequency response is, as Apple says, both you and your password. It's sent to the site or folder you're trying to open.

Bone conduction, actually, isn't as exotic as it seems. It's just another way of hearing sound waves. You might have seen a common use if you ever watched a musician tap a tuning fork and then bite down on it with his back teeth while he tunes his guitar. The sound of the vibrating fork is clearly conducted into his head down to his inner ear as, at the same time, he clearly hears the guitar strings vibrating through his outer ears as he changes the tension and tone.

There is a wide variety of "ears free" sports headsets on sale at Amazon that allow you to listen to music while jogging and still clearly hear the street noise and other sounds around you—it's a safer way to run near traffic. The two "ear pads" clamp on the side of your head, not in your ears, and they conduct the music or other broadcasts through the bone to the inner ear.

With the SkullConduct system, there's an additional microphone that picks up the sound vibrations resonating inside your head. Those will be unique to you. Your pattern, then, is translated into digital code. You might question the delivery system used in the SkullConduct trials. Isn't Google Glass an admitted failed experiment? Perhaps, but if you look forward, you might agree with the developers that if the technology can be adapted to a computer like your smartphone, then just placing your phone to your ear might be able to authenticate you.

The project is young, and Schneegass, Oualil, and Bulling have published a short paper wherein they "report on a controlled experiment with 10 participants (nine male, one female) that shows that this frequency response serves as a robust biometric." They say they were able to identify users with 97.0% accuracy and authenticate them with an equal error rate of 6.9%.

They point out that their tests were conducted in a quiet room, so there's a need to introduce ambient noise as you would find in uncontrolled real-life situations. The white noise signal lasted 23 seconds. Shorter transmissions might be more practical and accommodate those who are annoyed by white noise, and alternative sources, perhaps like short musical phrases, would be more acceptable. And speaking of acceptable, with a name like the SkullConduct System, you might as well just call it bone-box passwords. They need a softer, less anatomical name more along the lines of Touch ID.

In the conclusion of their paper, the researchers mentioned one of the system's strongest advantages. "While other biometric systems require the user to enter information explicitly (in other words, place the finger on a fingerprint reader), our system does not require any explicit user input." Certainly sounds nicer having a couple bars of Debussy floating in your head rather than trying to commit >z8zuC(r@1*7+HC to memory.

Michael Castelluccio has been the Technology Editor for *Strategic Finance* for 20 years. His SF TECHNOTES blog is in its 18th year. You can contact Mike at mcastelluccio@imanet.org.