

Cybersecurity: Personal and Professional Perspectives

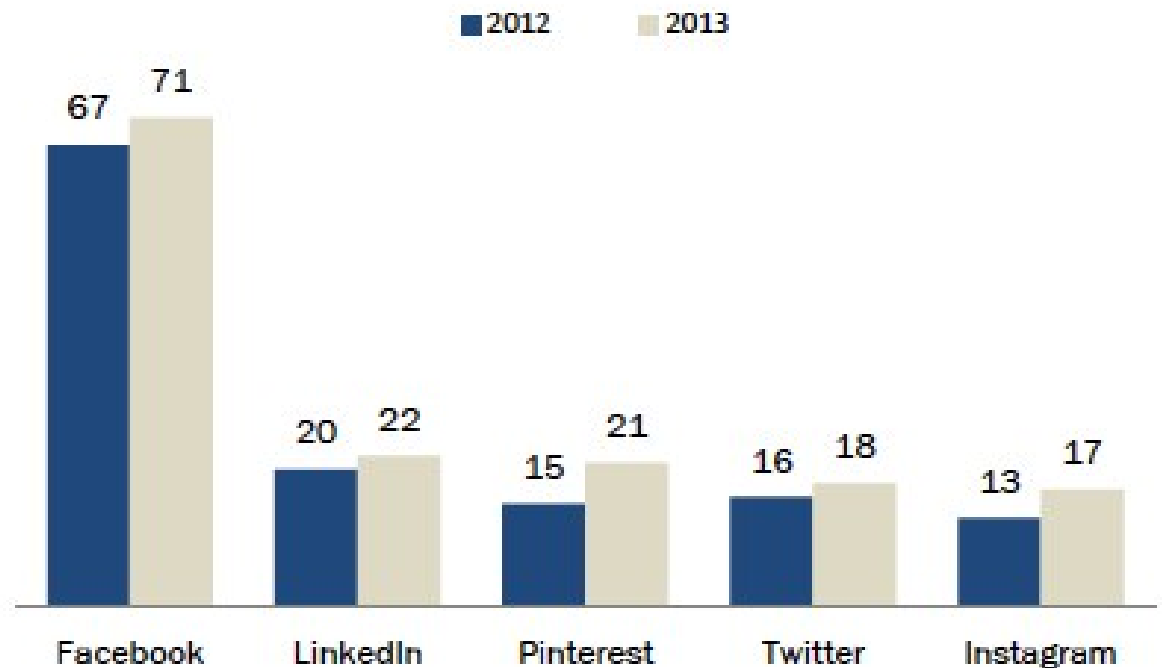
Frank Pasquale

University of Maryland



A Rising Tide of Social Media Use

Many more individuals are connecting online.



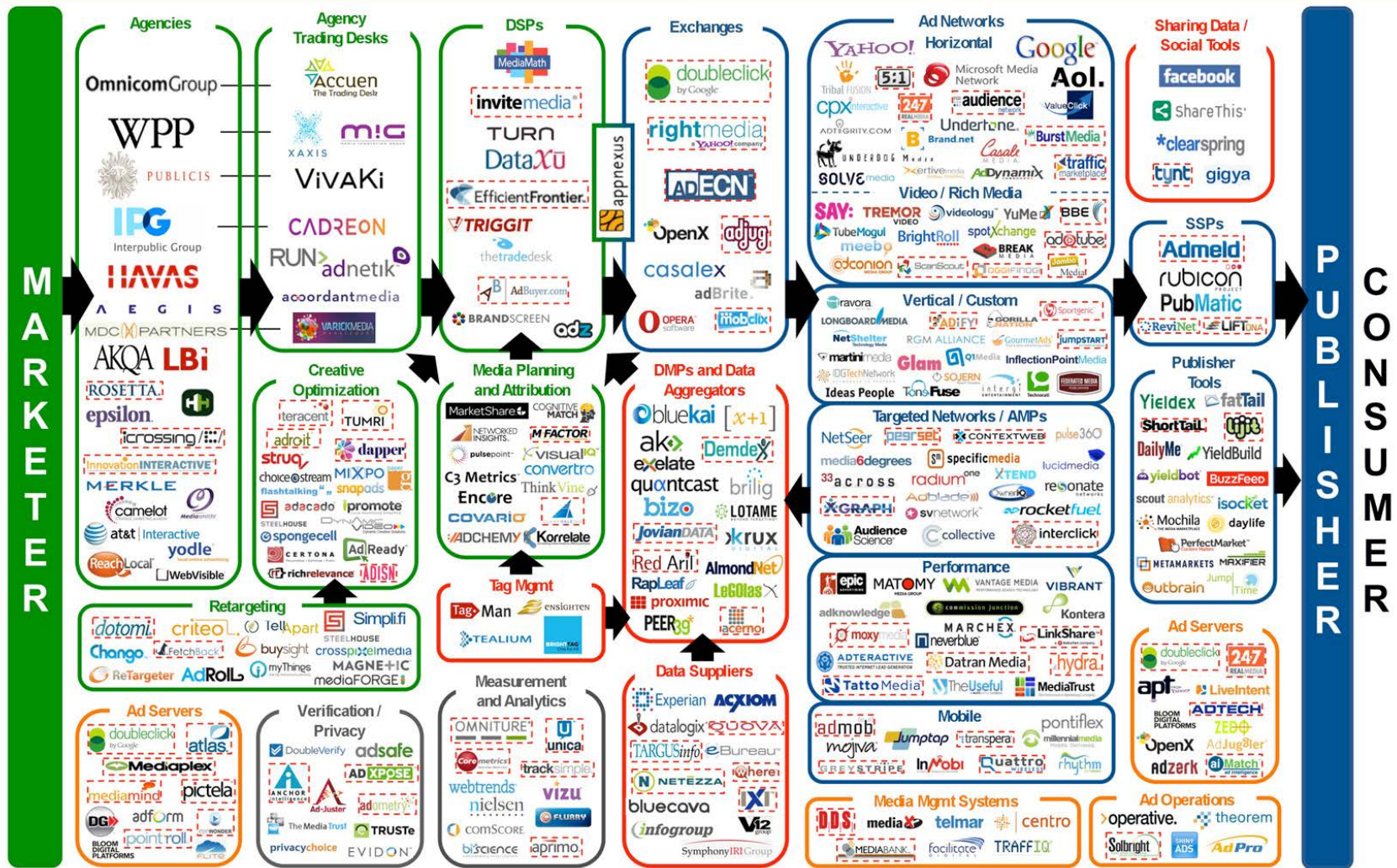
Pew Research Center's Internet Project Tracking Surveys, 2012 -2013. 2013 data collected August 07 -September 16, 2013. N=1,445 internet users ages 18+. Interviews were conducted in English and Spanish and on landline and cell phones. The margin of error for results based on all internet users is +/- 2.9 percentage points.

PEW RESEARCH CENTER

Advertising and the Data Vortex

- On platforms, you are not the customer; you are the product
- Endless data collection & transfers, indefinitely kept:

DISPLAY LUMAscape



Denotes acquired company

© LUMA Partners LLC 2012

VIDEO LUMAscape



MARKETER





Major Social Media Sites #s



- Facebook: 1.32B+ monthly users (Jun 2014)



- YouTube: 1B+ monthly users (YouTube, April 2013)



- Twitter: 645M+ active users (Jan 2014)



- LinkedIn: 313M+ users (LinkedIn, Oct 2014)

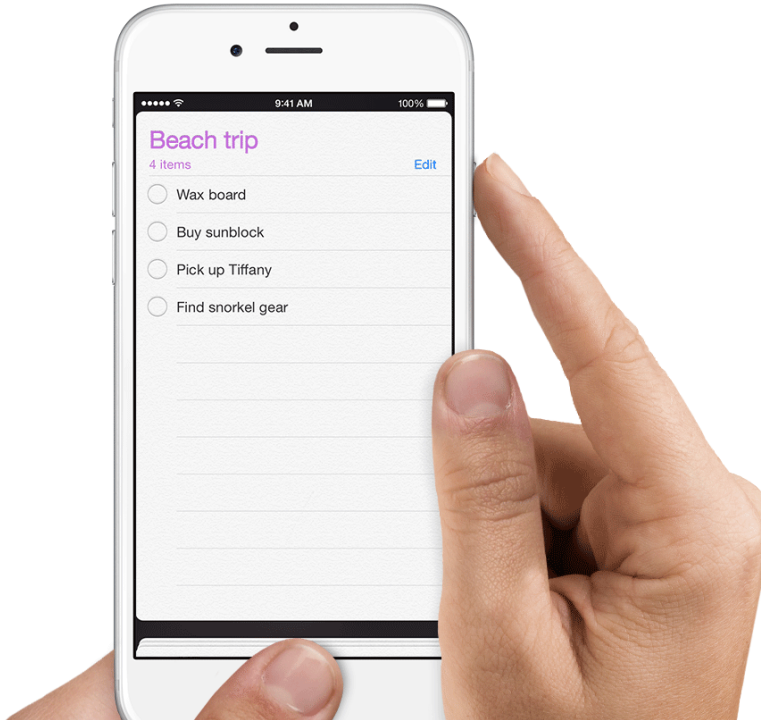


- Google+: 540M+ monthly users

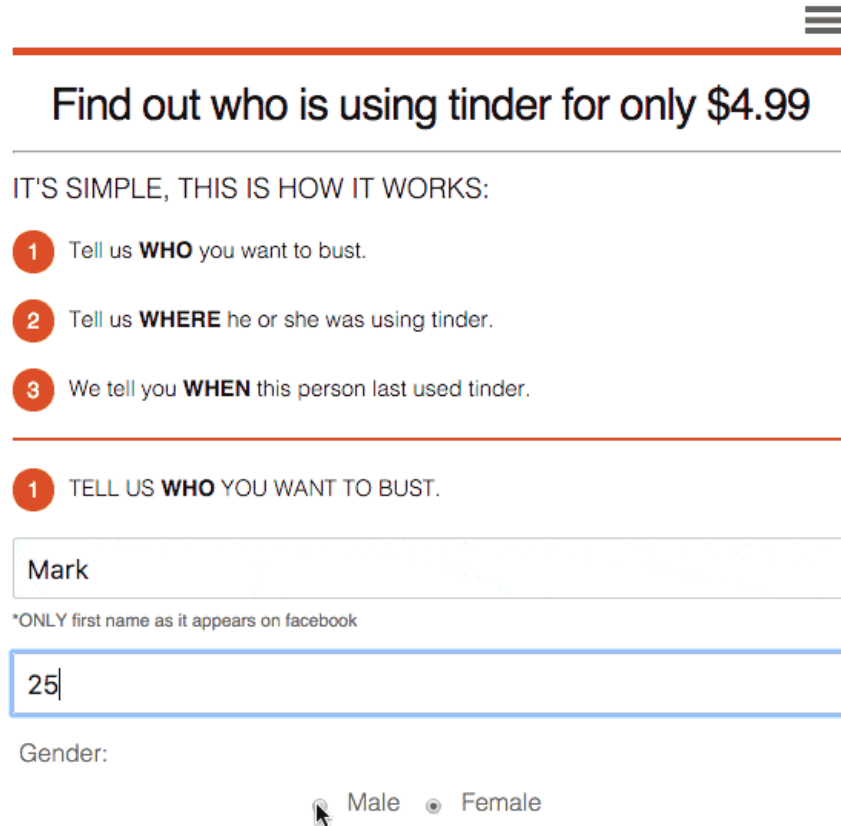
- Pinterest: 70M active users

Is Snapchat or “Ephemeral” Social Media Safer?

- Perhaps, but....
 - There is always screenshot risk
 - FTC enforcement action



SwipeBuster & the Popularization of Surveillance



The image shows a screenshot of the SwipeBuster website. At the top right is a hamburger menu icon. Below it is a red horizontal line. The main heading reads "Find out who is using tinder for only \$4.99". Below this is another red horizontal line. The text "IT'S SIMPLE, THIS IS HOW IT WORKS:" is followed by a numbered list of three steps: 1. Tell us WHO you want to bust. 2. Tell us WHERE he or she was using tinder. 3. We tell you WHEN this person last used tinder. Below the list is a red horizontal line. The first step is repeated: "1 TELL US WHO YOU WANT TO BUST." Below this is a text input field containing the name "Mark". Below the field is the text "*ONLY first name as it appears on facebook". Below that is a blue-outlined text input field containing the number "25". Below the field is the label "Gender:". At the bottom are two radio buttons, one for "Male" (which is selected) and one for "Female".

Find out who is using tinder for only \$4.99

IT'S SIMPLE, THIS IS HOW IT WORKS:

- 1 Tell us **WHO** you want to bust.
- 2 Tell us **WHERE** he or she was using tinder.
- 3 We tell you **WHEN** this person last used tinder.

1 TELL US **WHO** YOU WANT TO BUST.

Mark

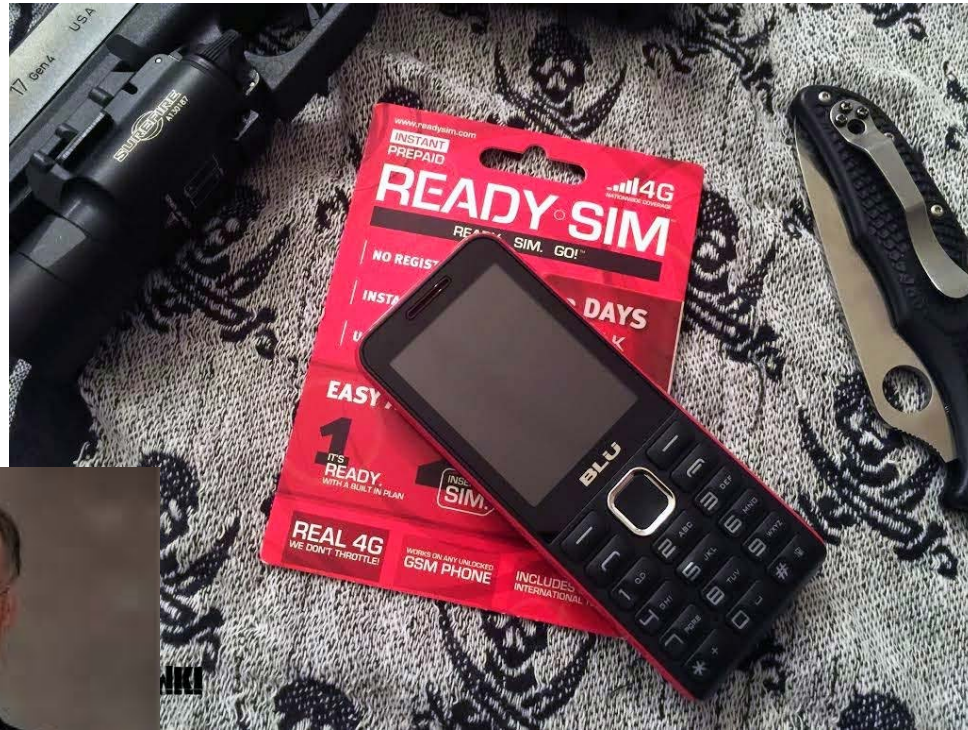
*ONLY first name as it appears on facebook

25

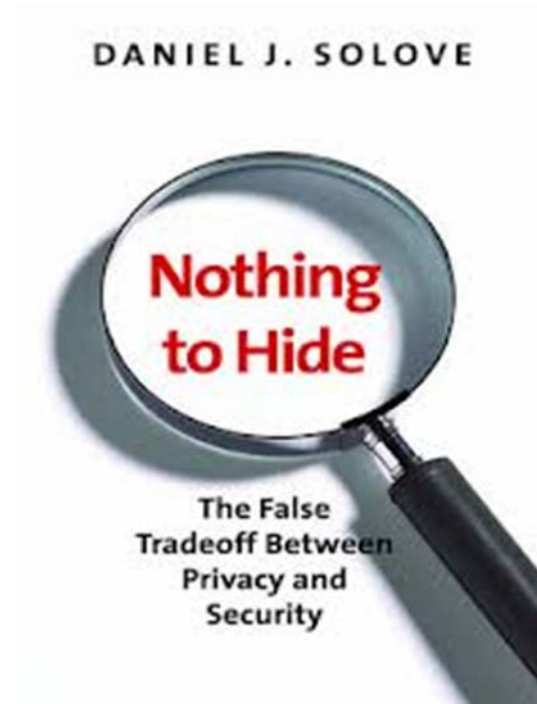
Gender:

☒ Male ☐ Female

Governor “Burner Phone” in Alabama May Be Impeached Soon



Privacy Paradoxes





Questioning Strategic Self-Disclosure Model of Privacy

BIG DATA:
SEIZING OPPORTUNITIES,
PRESERVING VALUES



DATA
BROKERS

A Call for Transparency and Accountability

1≡ Rape Sufferers List

Mailing List / Email List File owned by: MEDbase200	Medical List Database ID:677
Rape Sufferers List	98/100 on Nextmark.com
Base Price Per Thousand: \$79.00	Total Universe: Inquire for a Current Total Universe Count



Federal Trade Commission
May 2014





Emerging “Threats”

- Strategic self-disclosure can backfire
 - I may keep certain facts to myself to avoid being charged more (tracking as burden)
 - But maybe I miss out on better matches for my own preferences/personality (tracking as opportunity)

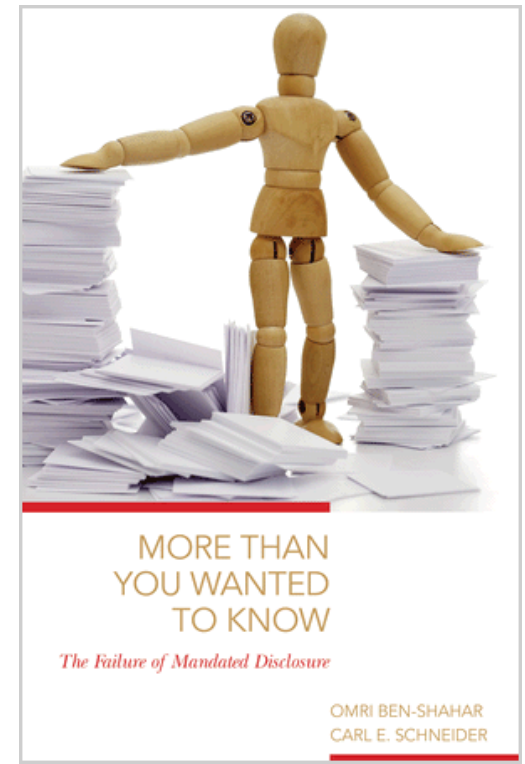
Room Rates

Orbitz is starting to show different results to users of Macs and PCs after finding Mac users spend more freely. In a recent search for hotels in Miami, Mac users saw more options over \$200. For El Paso, Texas, they saw more expensive options in the place of two cheaper ones.

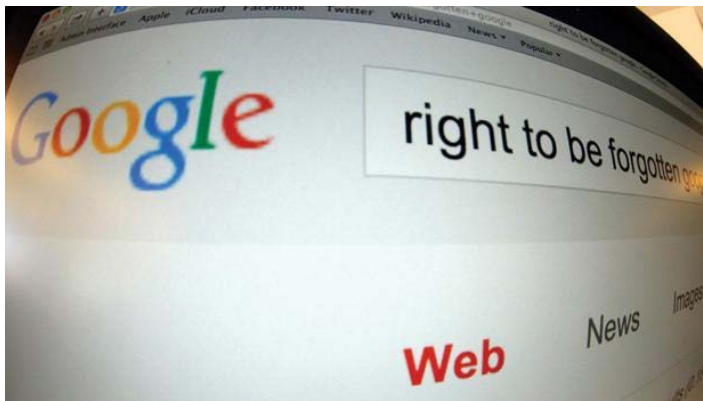
 Mac		 PC	
Miami		El Paso	
1. Hyatt House \$118	1. Hyatt House \$118	1-5. Same for both	1-5. Same for both
2. Design Suites \$124	2. Catalina Hotel \$209	6. Wyndham El Paso \$76	6. Travelodge \$40
3. Catalina Hotel \$209	3. Design Suites \$124	7. Studio Plus Deluxe \$54	7. Wyndham El Paso \$76
4. Churchill Suites \$189	4. The Richmond Hotel \$156	8. Hyatt Place El Paso \$76	8. Studio Plus Deluxe \$54
5. The Richmond Hotel \$156	5. Churchill Suites \$189	9. El Paso Marriott \$89	9. Days Inn \$55
6. Eden Roc Renaissance \$212	6. Ocean Spray \$95	10. Radisson Hotel \$98	10. Hyatt Place El Paso \$76
7. The Palms Hotel & Spa \$224	7. South Seas Hotel \$175		

Problems of Notice & Consent

- Is there real opportunity to negotiate terms of contracts?
- Is there real competition among providers regarding terms?
 - Do we want that?
(remember anonymous remailers?)
- Can consumers really
 - anticipate secondary uses?
 - assess likelihood of breaches?



From Collection to Use & Availability Controls





First Amendment, but...



A FCRA-like Future for a Full-Disclosure Society

- “Cyberhygiene” appears increasingly futile for individuals.
- The new privacy demands will focus on *responsible use* of materials from an increasingly “full-disclosure” future.
- There will, of course, be hard cases...

How a Heart Monitor Works

Modern implants collect reams of data, but patients don't have direct access to that information.

Here's how some Medtronic defibrillators gather data:

5 **But patients can't**

There is no way for patients to directly access the data. The Food and Drug Administration says Medtronic and other companies would first need to obtain regulatory approval.

DENIED

4 **Doctors can obtain a summary**

Doctors can log on to a Medtronic website to get a summary report from a patient's device. The report includes some, but not all, the data from the defibrillator.

1 **The device is implanted**

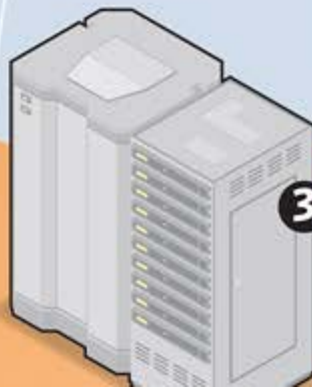
Doctors connect the defibrillator and its sensors to the heart. Its main job is to zap a stalled heart back into action. But it also records heartbeat and other data points.

2 **Patient's home monitor collects data**

In a patient's home, a separate monitoring device can wirelessly grab the data stored on the defibrillator when a patient passes nearby.

3 **Files are transmitted to Medtronic**

Medtronic collects data covering patients' heart rhythms and rates, as well as myriad details related to the device's function, such as battery life or proper electrical functioning.



The Anatomy of a Tweet

Note the public nature of Twitter defaults



Steve Chandler @sschandler

3h

Whoa. RT @shanaspeaks Patients choose hospitals based on #socialmedia. bit.ly/IVwbai #hcsn

Expand



Mayo Clinic @MayoClinic

2h

Registration for #MayoRagan Social Media Summit is open - save \$500 this week only! mayocl.in/J05HST #MCCSM #HCSM

Expand



Klick Health @klickhealth

3h

RT @farristimimi: There are 185 mobile phones in US for every hospital bed #mhealth #hcsn pinterest.com/pin/3870287801...

Expand

Government Agencies on #HCSM





LinkedIn

LinkedIn Account Type: Basic | Upgrade

Nancy Clark Add Connections

Home Profile Contacts Groups Jobs Inbox 4 Companies News More

People Search... Advanced

[Attn: Female Directors - Apply to the Worldwide Who's Who network for Successful Women.](#)



Share an update

Attach a link



Share

LinkedIn Today: See all Top Headlines for You

Expert: Millions of jobs will "reshore" back to U.S.



When Choosing a Job, Culture Matters

via blogs.hbr.org



Why Your Company Needs A Chief Collaboration Officer



All Updates • FSU... Coworkers • Shares • More ▾

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Lee McMillian is now connected to **Philip Payne**, Associate Professor and Chair, Department of Biomedical Informatics at The Ohio State University Medical Center

Send a message • 1 hour ago



Corey Fleming, RRT, MHA, FACHE is now connected to **Cynthia S. Perez**, Intern at Ernst & Young, **Nini Perry, MBA, RN**, Director of Quality & Risk Management at Behavioral Centers of America (CCH) and **Andrea Gwyn**, Assistant Administrator at HCA

People You May Know



Curtis Stine, Professor and Associate Chair at Florida State

Connect



Val Glenda Marchesoni, --

Connect



Kenneth Higgins, Sr. Medical Informatics Trainer at Florida State

Connect



[See more »](#)

IT'S TIME FOR
THE CISCO UNIFIED COMPUTING SYSTEM.
POWERED BY THE INTEL® XEON® PROCESSOR.

Learn More



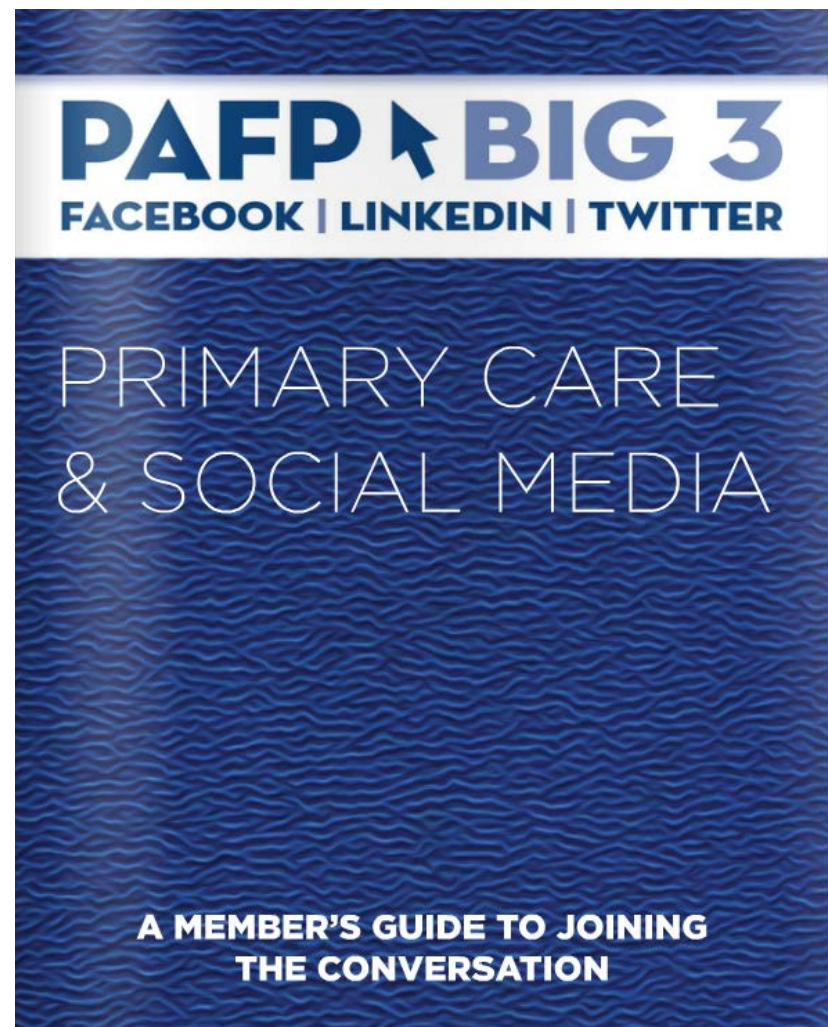
BUILT FOR
THE HUMAN
NETWORK



Physician's Guide to Using FB, Twitter, LI

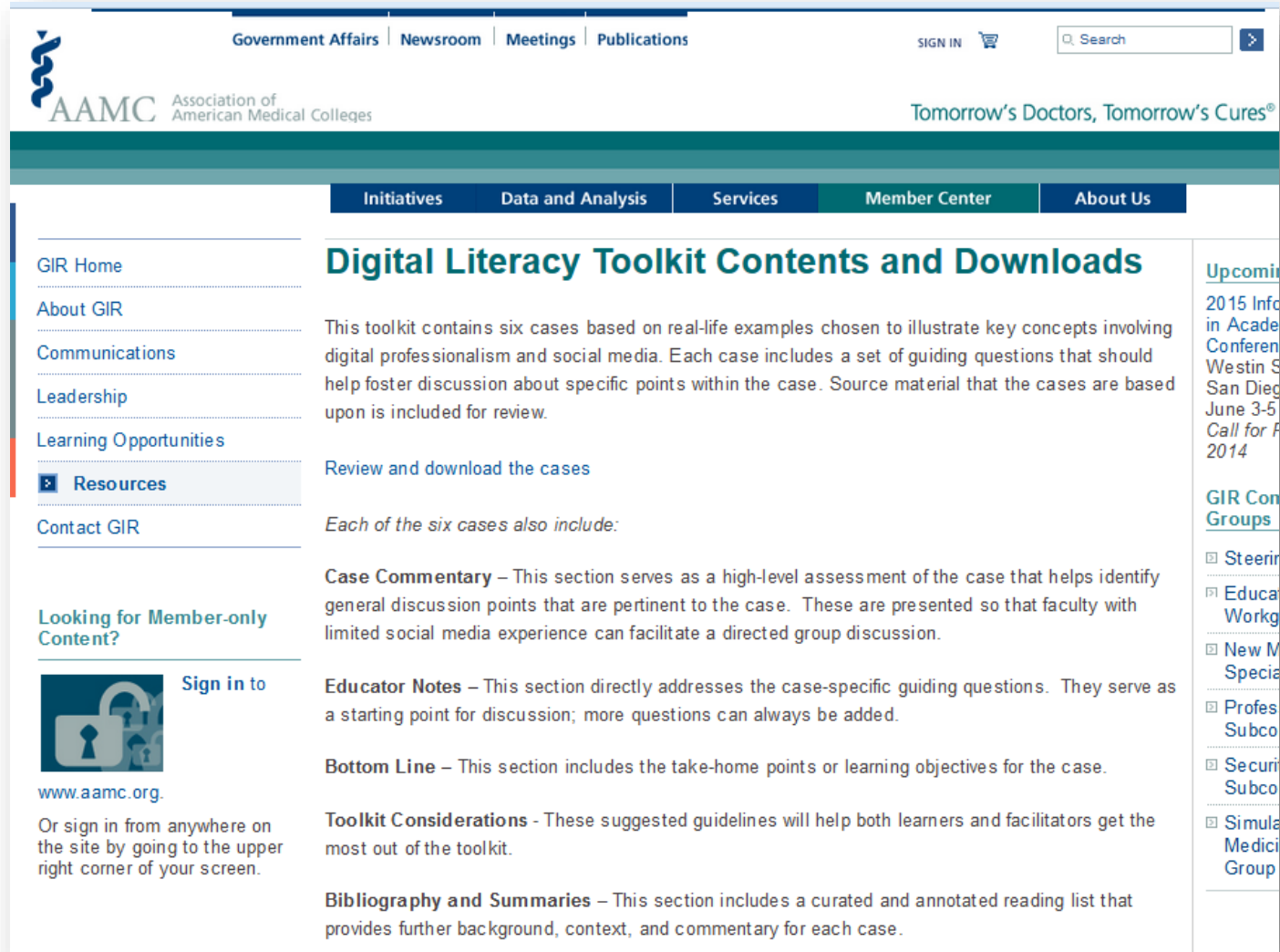
- Pennsylvania Academy of Family Physicians
- Guide to Social Media
- Advanced Guide now available. Includes setting up a Blog at Wordpress.com

<http://bit.ly/1yDwklv>



AAMC Digital Literacy Initiative


<https://www.aamc.org/members/gir/resources/359492/digitalliteracytoolkit.html>



The screenshot shows the AAMC website's member resources page for the Digital Literacy Toolkit. The header includes the AAMC logo, navigation links (Government Affairs, Newsroom, Meetings, Publications), a sign-in link, and a search bar. A secondary navigation bar highlights 'Initiatives', 'Data and Analysis', 'Services', 'Member Center', and 'About Us'. The left sidebar contains links for GIR Home, About GIR, Communications, Leadership, Learning Opportunities, Resources (highlighted), and Contact GIR. The main content area is titled 'Digital Literacy Toolkit Contents and Downloads' and describes a toolkit with six cases. It lists the contents: Case Commentary, Educator Notes, Bottom Line, Toolkit Considerations, and Bibliography and Summaries. A right sidebar shows 'Upcoming' events and 'GIR Content Groups'.

AAMC Association of American Medical Colleges
Tomorrow's Doctors, Tomorrow's Cures®

Government Affairs | Newsroom | Meetings | Publications

SIGN IN 

Initiatives | Data and Analysis | Services | **Member Center** | About Us

GIR Home
About GIR
Communications
Leadership
Learning Opportunities
Resources
Contact GIR

Digital Literacy Toolkit Contents and Downloads


This toolkit contains six cases based on real-life examples chosen to illustrate key concepts involving digital professionalism and social media. Each case includes a set of guiding questions that should help foster discussion about specific points within the case. Source material that the cases are based upon is included for review.

Review and download the cases

Each of the six cases also include:

- Case Commentary** – This section serves as a high-level assessment of the case that helps identify general discussion points that are pertinent to the case. These are presented so that faculty with limited social media experience can facilitate a directed group discussion.
- Educator Notes** – This section directly addresses the case-specific guiding questions. They serve as a starting point for discussion; more questions can always be added.
- Bottom Line** – This section includes the take-home points or learning objectives for the case.
- Toolkit Considerations** – These suggested guidelines will help both learners and facilitators get the most out of the toolkit.
- Bibliography and Summaries** – This section includes a curated and annotated reading list that provides further background, context, and commentary for each case.

Looking for Member-only Content?

 Sign in to www.aamc.org


Or sign in from anywhere on the site by going to the upper right corner of your screen.

Upcoming
2015 Info in Academic Conference Westin San Diego June 3-5 Call for Papers 2014

GIR Content Groups


- ☐ Steering Committee
- ☐ Educational Workgroup
- ☐ New Medical Specialties
- ☐ Professional Subcommittees
- ☐ Security Subcommittees
- ☐ Simulation Medical Group

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**Learn from others**
Compare treatments, symptoms and experiences with people like you and take control of your health

**Connect with people like you**
Share your experience, give and get support to improve your life and the lives of others

**Track your health**
Chart your health over time and contribute to research that can advance medicine for all

Grief and Community Support

The image shows a screenshot of the CaringBridge website. The top navigation bar includes links for 'Sites', 'SupportPlanner', and user options 'Nancy (log out)' and 'Español'. A yellow banner below the navigation bar features the CaringBridge logo and the text 'more heart than ever' with a sub-header 'Read more about our new look and exciting additions.'.

The main content area is divided into two columns. The left column, titled 'SITES', describes the platform as a 'personal, protected online space where you can post health updates and keep friends and family informed'. It includes a 'Start a site' button and a 'connect and share' section listing features like user preferences, privacy settings, and data protection.

The right column displays a user profile for 'Charlie Witmer'. The profile header includes the name 'Charlie Witmer' and a navigation menu: 'WELCOME | My Story | Journal | Guestbook | Photos | Tributes | Resources'. Below the header is a photo of Charlie, a man in an orange shirt, standing outdoors. A pop-up box titled 'Amplify the love' explains that users can amplify guestbook messages with a button click. To the right of the photo, text mentions Charlie is undergoing treatment for stomach cancer and encourages visitors to read his story, view his photo gallery, and write in his guestbook. A 'Read My Story' link is provided.

On the far right, a sidebar displays statistics: '17,323 visits' with a link to 'Invite more people', and '37 tribute donations' with a link to 'Donate now to CaringBridge in tribute to Charlie.' and a link to 'Read the tributes in honor of Charlie.'.

At the bottom of the profile section, there is a 'help a friend' section with the text 'Do you know someone who needs CaringBridge?'.

A question of access

- Data
- Algorithms
- Inferences
- Lists

