



Collaborate Securely

And Still Meet Users' Needs

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AV / Collaboration / IoT / Multimedia / UC / Video



Editor
IT/AV Report

Director of Emerging Technology
Interactive Multimedia & Collaborative Communications Alliance

Director of UC Strategy & Research
Plantronics / Polycom

Over three decades of end-user experience:

- **JP Morgan Chase** – built & managed largest commercial Cisco TelePresence
- **Lehman Brothers** – built & managed all audio and video rooms and systems
- **Bloomberg** – design and build of all TV and Radio
- **NYU** - Development of TV and Media Services Dept. and Campus Cable TV
- **AT&T, Financial News Network, MTV, NBC, Rutgers University** & many others.

Industry recognition:

- **IMCCA** – Executive Board of Directors – Director of Emerging Technology
- **AVIXA** – Emerging Technology Fellow 2017, Adjunct Faculty - since 2007
- **NAB** – Broadcast Engineering Judge - since 2001
- **Consumer Electronics Show** – Analyst since 2003, Judge 2011, 2013, 2016-2018
- **Enterprise Connect** – Innovations Judge 2012, Speaker 2013-2018

One of the top 100 Unified Communications Influencers 2017 <http://www.analytica.com>

Number one Unified Communications Influencer 2018 <http://www.em360.tech>



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What Is The IMCCA?

Interactive Multimedia and Collaborative Communications Alliance

- Non-profit, technology neutral
- Focus on all multimedia & collaboration
- Increase awareness & branding
- Unification of organizations & interests
- Further learning objectives
- Industry Alliances
- Networking Opportunities
- Monthly Newsletter
- Educational Opportunities
- Special Interest Groups



www.IMCCA.org

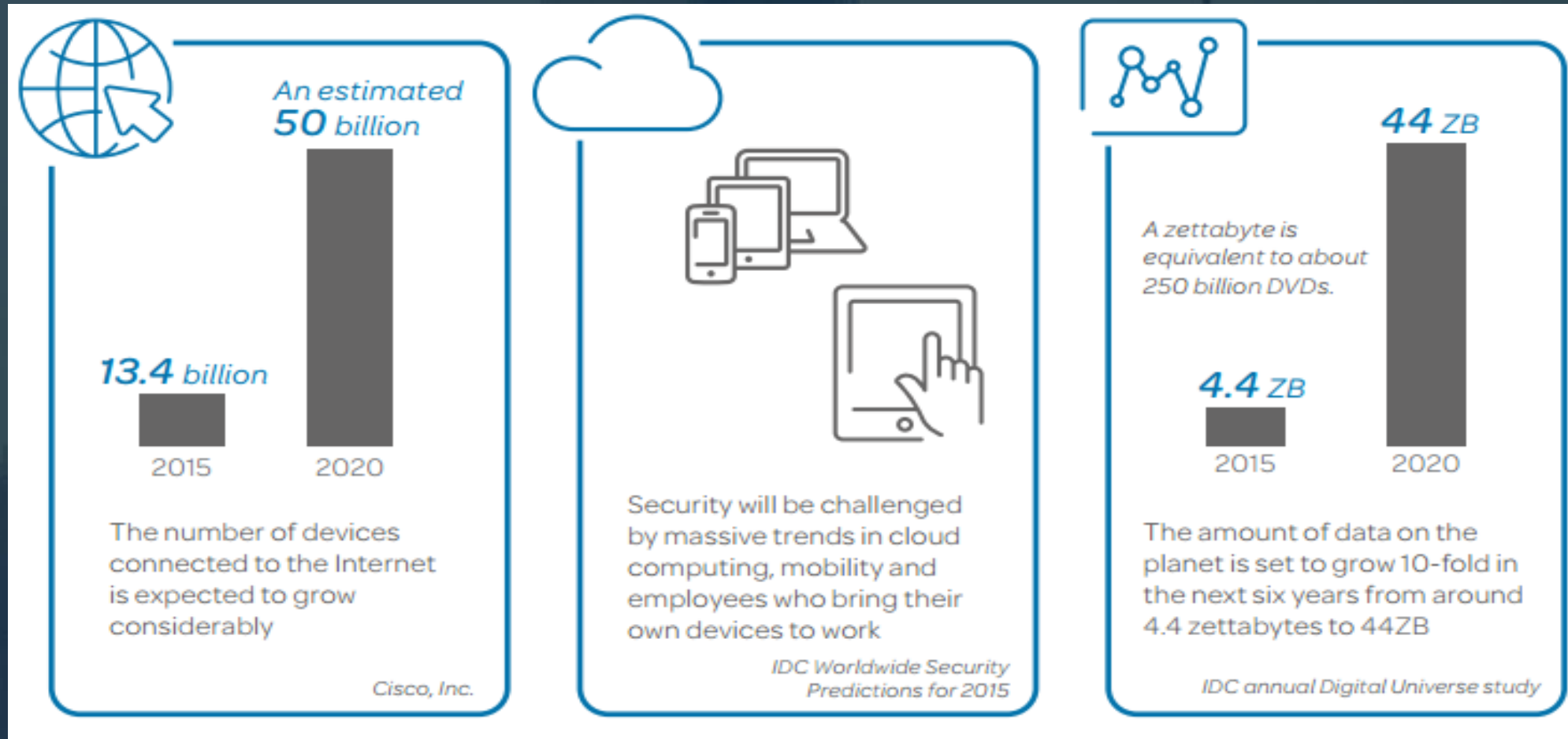
*Free Membership For End Users
Many Benefits for Vendor Members
Contact Carol Zelkin, Executive Director
Czelkin@imcca.org*



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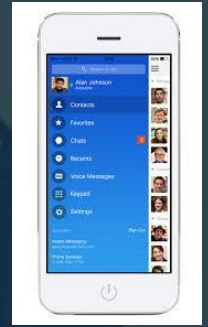
The Challenges Of A Connected World

Connectivity, Cloud, IoT - all are growing exponentially



The Challenges Of A Connected World

User expectations are also growing exponentially



Enterprise users have AI, Voice Control and Mobility in their personal lives, and expect those tools to function the same way in their professional lives.

The Challenges Of A Connected World

Breaches and malware exposures are 'off the charts'



“...many devices have problematic and insecure default passwords such as “admin” or “1234; that is if they even have a password enabled at all. Moreover, devices often have unnecessary ports open without overtly informing the end users; ie in the user manual, which few take the time to fully read. Many users and integrators will install the device(s), initialize it, and forget about it until it breaks.”

The Challenge For Enterprises

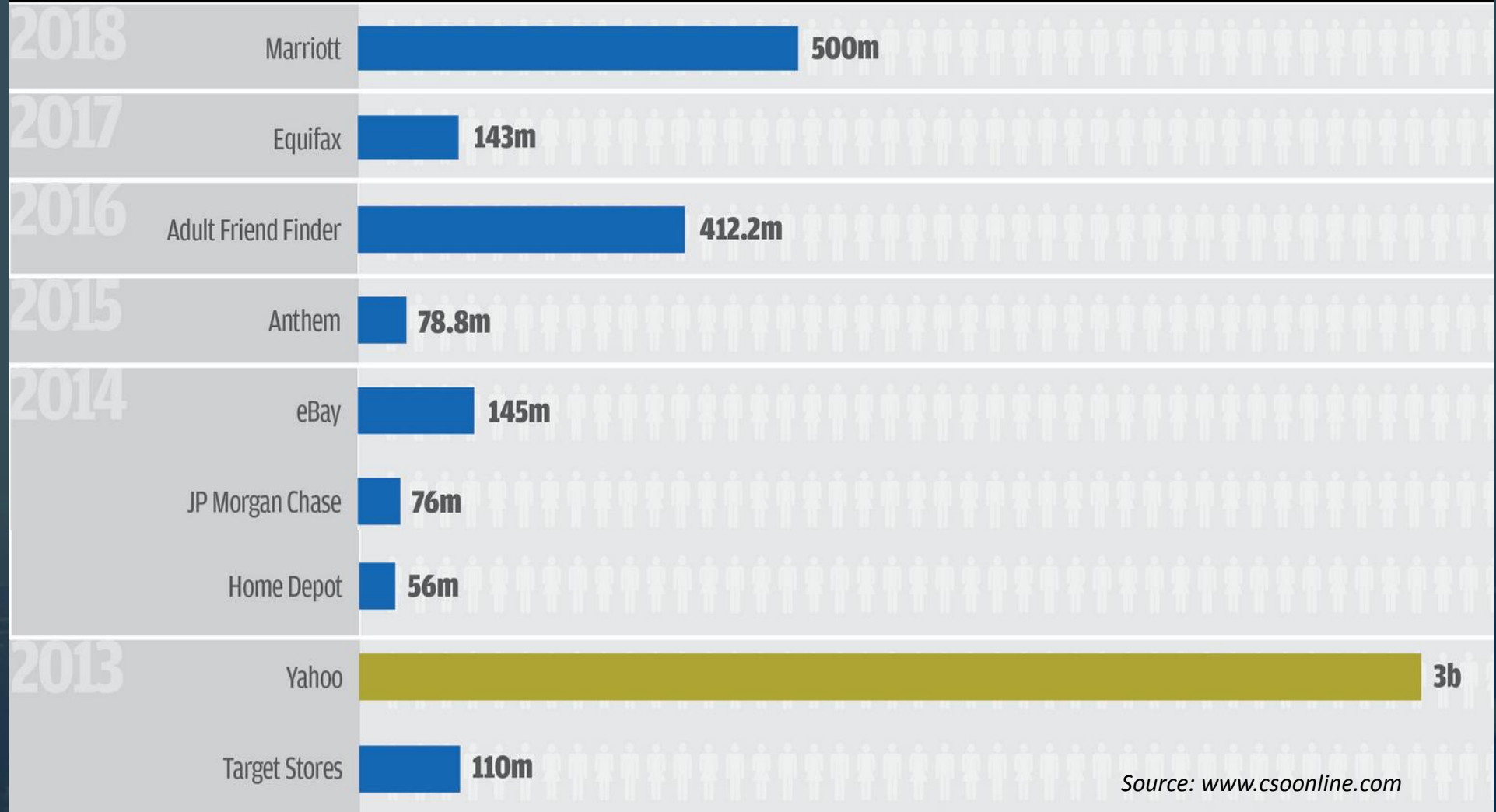
Balance user expectations with security realities

Biggest **DATA BREACHES** of the 21st century

Accounts
Compromised

 by the millions

 by the billions



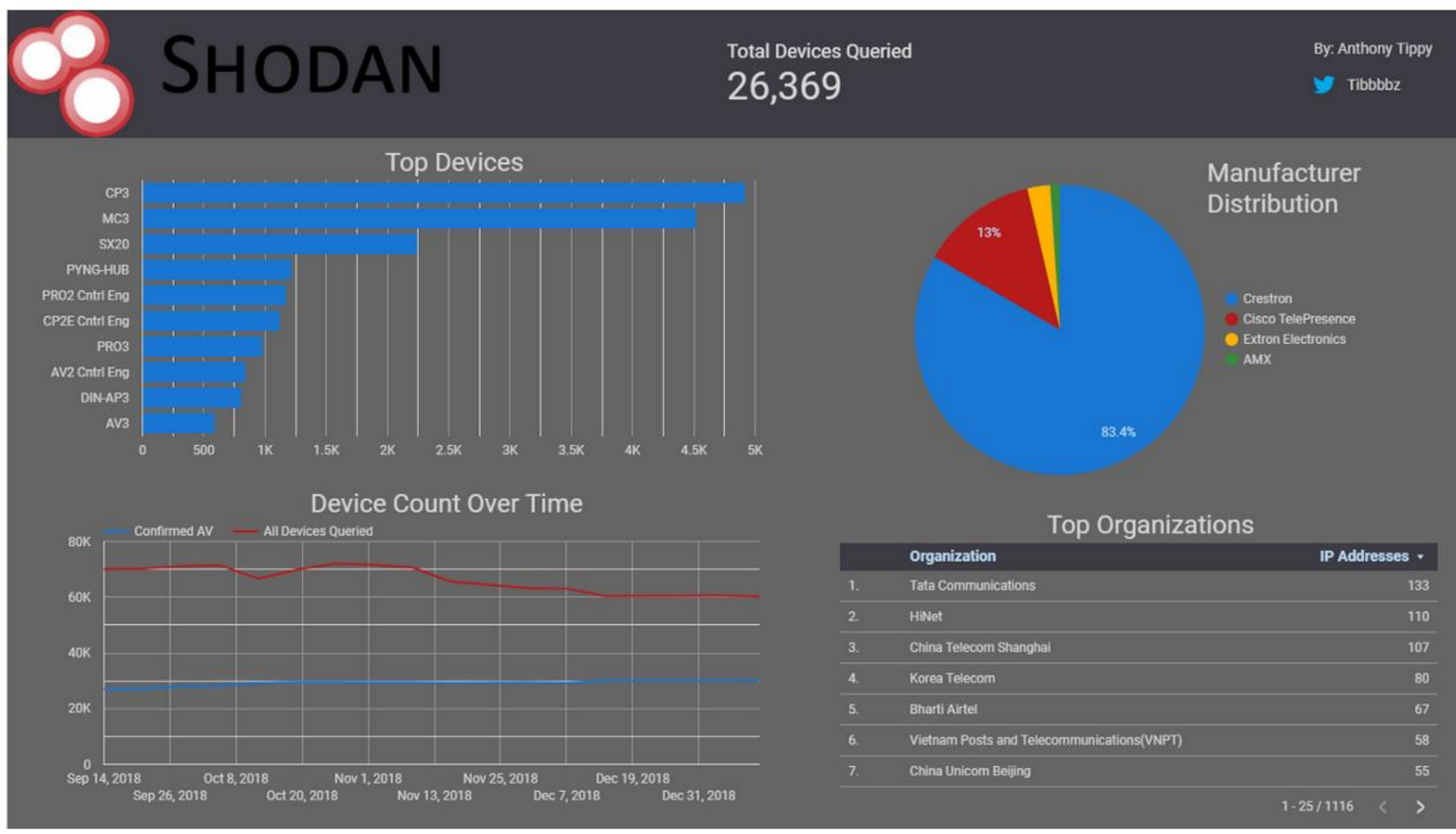
Source: www.csoonline.com

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The Challenges Of A Connected World

Quantifying the problem



- 26,369 devices found and accessed by security research student between 8/2018 and 1/2019
- Access to web control was often gained with either no password or default password
- *Many devices are shipped from the manufacturer with no authentication required. Integrators generally don't apply any security measures*

<https://medium.com/@atippy83/risks-vulnerabilities-in-enterprise-audio-visual-systems-part-3-results-484432c33463>

The Challenges Of A Connected World

Balancing Access With Security

Easy Access To External Communications

Mobile Access To Real-Time Collaboration Platforms

Mobile Access To Documents

Simple Wireless Sharing

Simple Document Portability (USB Stick)

Locked-Down Ports And Firewall Restrictions To Prevent Intrusion

VPN, VDI And Other Restrictive Tunnels Prevent Easy Access

Compliance And Security Restrictions On Intellectual Property

Restricted Wireless Connectivity

Locked-Down Ports To Prevent Both Malware And IP Theft

Mobility - Email

Enterprise Challenges In A Connected World

- BYOD – Add my enterprise email account to my personal mobile device
- CYOD – Pick an enterprise provided device
- BYOD + MDM – Add an enterprise management tool to my personal device
- NONE – No access to enterprise email on any mobile platform



IM & P, Desktop Video

Enterprise Challenges In A Connected World

- Closed – Works only within the enterprise
- Open Federated For Text – See status and message any other open firm
- Open Federated – Allows IM, Voice and Video outside of the enterprise
- Compute Platform – Drivers and peripherals all work
- VDI – Thin clients prevent ease of use, require optimization



Cloud Offerings

Enterprise Challenges In A Connected World

- None – Platforms and systems are all on-premises (becoming more scarce)
- Major Providers – MS Office 365, Cisco Webex
- Platform Providers – Zoom, BlueJeans, Slack, Salesforce, etc.
- All Of IT – Enterprises operating in the cloud instead of their datacenters



Room Systems

Enterprise Challenges In A Connected World

- Appliance vs General Compute:
 - Monitorability, Scalability, Remote Management, Reliability
- Single Source vs Integrated:
 - Ability to rapidly patch (if at all), Ability to replace not troubleshoot
- Direct Dial vs Meet-Me:
 - Scheduling, OBTP, External Access / Ports



Room Systems – Pt. 2

If you do still deploy integrated rooms

- Network Connectivity:
 - Air-Gap network for AV gear
 - Safer, but could prevent monitoring / management
 - Dedicated VLAN for AV / Collaboration gear
 - Virtual separation for riskier endpoints
 - Still inside the firewall
 - Attach to standard organization network
 - Riskiest strategy

Urgent Step To Prevent Malware: Personal or AV Firm owned notebook/device used for install or troubleshooting should not be allowed going forward. Service notebook should be purchased by enterprise and 'checked-out' by service technician if needed.



Conclusions – Action Items

Enterprise Challenges In A Connected World

- AV / Collaboration / IT security are THE SAME THING.
 - AV and collaboration can no longer be allowed to operate in a silo outside of standard IT Security practices
- Trade-Offs are Everywhere.
 - Ease of use, simplicity of implementation – less secure
 - The more robust the security planning, the more restrictive the use and the harder to implement
- Intelligent compromises need to be conscious decisions by enterprise leadership.
 - Too restrictive prevents collaboration and user satisfaction, too loose is a serious security risk
- Best Practices now need quarterly updates.
 - Legacy processes are destined to cause breaches and increase risk

These are our panelists for today



BLACKROCK®

John Hoyt



AIG

Mirril McMullen



Amicus
Therapeutics®

Gary LaSasso

Questions For Our Panelists:

- How aware are you / is your organization of the need for a security focus on AV and collaboration?
- Tell us about your choices (BYOD/CYOD/Enterprise Owned; Full Compute / VDI; Cloud / On-Prem) and why.
- Have your end-users requested voice control or other modern AI based tools in their collaboration?
- How actively do you get engaged with AV / Collaboration integrators regarding security access, password control and access management? Have you removed the default passwords from all gear?
- Does your collaboration gear sit on the enterprise network, a separate VLAN or an air-gap network?

Attendee Raffle Prize



Panacst 2 Camera from Altia Systems



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