


# Cyber Security

**Moderator:** Keith Overly, Ohio Deferred Compensation

**Panelists:** Kelvin Coleman, National Cyber Security Alliance  
David Levine, Groom Law Group



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## Today's Presentation

- Cybersecurity: The 5<sup>th</sup> Domain
- Emerging Trends and Threats
  - Artificial Intelligence
  - Internet of Things
  - Conversational Platforms
- Where To Go From Here

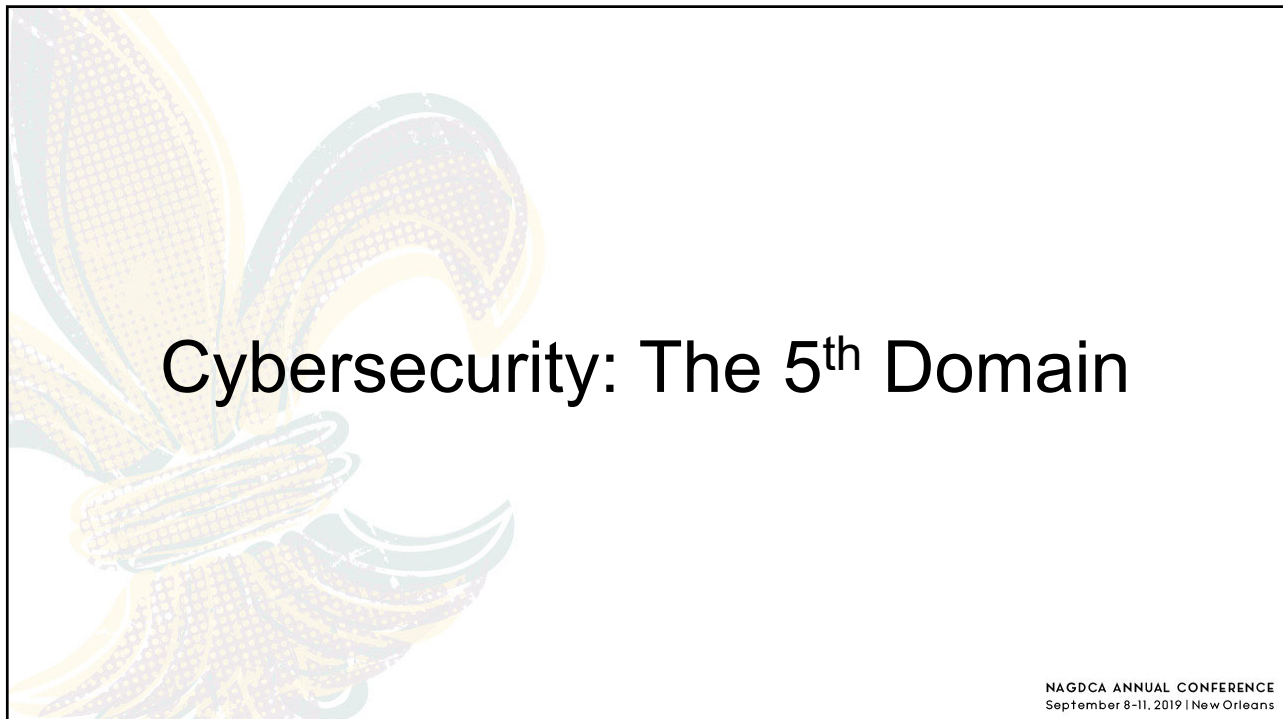


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## Who Is Covered By The 5<sup>th</sup> Domain?

- Plan Sponsors and Fiduciaries
- Employers
- Participants and Beneficiaries
  - Families and Outside Advisors
- Service Providers
  - Recordkeepers
  - Advisors/Consultants
  - Other Service Providers



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## Emerging Trends That Impact DC Plans

- Artificial Intelligence
- Internet of Things
- Conversational Platforms



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## Artificial Intelligence

Technology that appears to emulate human performance typically by learning, coming to its own conclusions, appearing to understand complex content, engaging in natural dialogs with people, enhancing human cognitive performance (also known as cognitive computing) or replacing people on execution of nonroutine tasks.



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## Artificial Intelligence

Every aspect of our lives will be transformed by AI and it could be the biggest event in the history of our civilization.

- Stephen Hawking



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# Artificial Intelligence

Calista\_Flockhart\_0002.jpg  
Detection & Localization

Frontalization  
152x152x3

C1: 32x32x16 @142x142

M2: 32x32x32 @71x71

C3: 16x16x32 @35x35

I4: 16x16x16 @55x55


I5: 16x7x16 @25x25

I6: 16x5x16 @21x21

REPRESENTATION: 4096d

SFC labels: 4030

Facebook




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# Artificial Intelligence

42% Portrait of Baba Ovganov, Artist  
Durdy Bayramov

Durdy Bayramov  
Art Fondation  
Google Arts & Culture




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# Artificial Intelligence

52% Portret van de dichteres Juliana C...  
Ludwig Gottlieb Portman



Rijksmuseum  
Google Arts & Culture




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# Artificial Intelligence

## Challenges and Risks

- Traditional Phishing Scams Get A Steroid Boost
- Hackers Use AI
- Fake News and Propaganda



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## Examples of Impact on Defined Contribution Plans

- Phishing Scams
  - Data Scraping From Public Databases and Integration
  - Automated Phone Call Systems
  - Leveraging Data Breach and Integration of Data
  - "Integration Into" Service Provider Databases
- Social Media
  - Deceptive Links
  - AI Driven "Copycat" Twitter Accounts
  - "Learning" From Prior Success

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## Internet of Things (IoT)

The network of physical objects that contain embedded technology to communicate and sense or interact with their internal states or the external environment.



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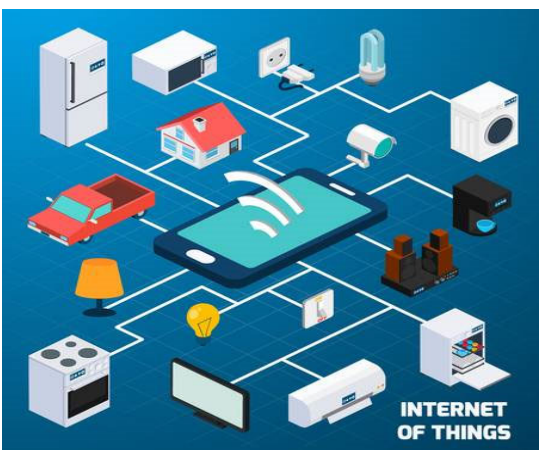
# Internet of Things (IoT)

[T]he Internet will disappear. There will be so many IP addresses, so many devices, sensors, things that you are wearing, things that you are interacting with, that you won't even sense it. It will be part of your presence all the time. Imagine you walk into a room, and the room is dynamic. And with your permission and all of that, you are interacting with the things going on in the room.

- Eric Schmidt, Google chairman



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## Internet of Things (IoT)

### Challenges and Risks

- More devices connected so more risk from viruses, malicious attacks and other nefarious activity
- Public sector at the mercy of cybersecurity/connection
- Density of IoT is a blessing and curse



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## Example of Impact on Defined Contribution Plans

- Diverse Access Methods
  - IOT Is Often In The Middle Of Wifi And Other Networks
  - With Push To Tech Access, These Devices Often Not Secured
  - Key Credentials – Including Two Factor Security Solutions – Can Be Intercepted By Corrupted IOT Devices
  - Impacts All Stakeholders

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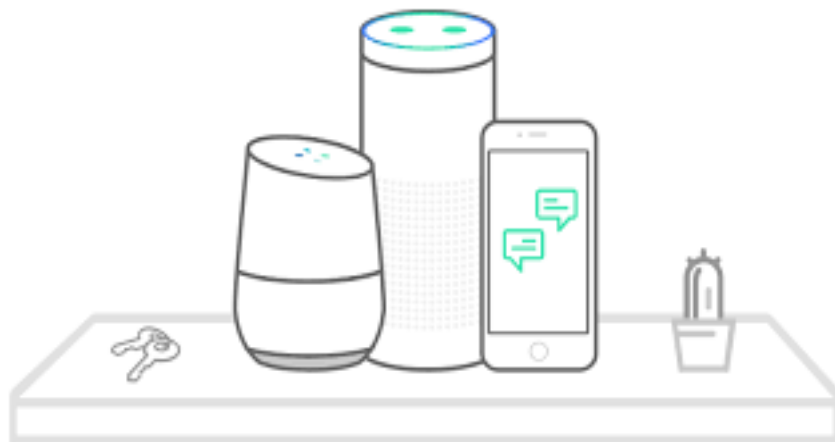
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## Conversational Platforms

Conversational Platforms allow people to communicate with applications, websites and devices in everyday, humanlike natural language via voice, text, touch or gesture input.



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# Conversational Platforms

- Constitutes/Customers
- Devices
- Suppliers
- Employees
- Vendors



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# Conversational Platforms

## Challenges and Risks

- Potential ease of manipulation through social engineering attacks
- Loss of context
- Real world emergencies difficult to manage



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## Example of Impact on Defined Contribution Plans

- Voice Devices
  - Recent Scandals Involving Recordings On Major Devices
  - Intentional App Usage And “Mistaken” Recordings
  - Humans Hearing Information
- Increased Use Of Chatbots For Human Resources And Retirement Services
  - Crossover With AI Abilities In Chatbots
  - Integration With Leaked Data
  - “Fake” Chatbots

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## Where To Go From Here

- Contracting With Vendors
  - RFP Terms
  - Contract Terms
    - Defining Personally Identifiable Information
    - Cybersecurity (and Privacy) Items
    - Defining Breach
    - Who “Owns” A Breach
    - Providing SOC-2 Reports and Other Documents
      - Encryption At Rest and In Transit
    - Looking to the SPARK Data Security Standards
  - Testing
    - SOC-2
    - Other Penetration Testing?
  - Periodic Reporting and Notification
  - Remediation and Other Protections



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## Where To Go From Here

- **Understanding New Technologies And Solutions**
  - Collaboration Between Tech and Non-Tech Teams (And Outside Consultants)
  - Knowing “Who” Is Providing The New Technology / Solution
    - Onshore/Offshore
    - Subcontracting
    - Where Does Source Code Come From?
  - Use Of Data – And Protection In Sale, Bankruptcy, And Other
  - Being Aware Of Technology Vulnerabilities
    - AI Exposure – Cloud Based Computing and Controls
    - IOT – Unpatched Vulnerability
    - Conversational Platforms – Spoofing and Manipulation Through Social Media



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## Where To Go From Here

- **Internal Controls At The Plan And Employers**
  - Service Providers And Products Are Not The Only Vulnerability
  - The Human Element Is Key
  - Security Processes
    - Patched Software and Devices – Including IOT
    - Limited Access To Data
    - Control Of Personally Identifiable Information
    - Credential Controls and Two Factor Processes
  - Education Action Steps
    - The Analogy To HIPAA Training



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## Where To Go From Here

- Participants, Beneficiaries, Their Representatives and Outside Advisors
  - Education And Training On Security Items
  - Ensuring Security As A Default With Vendors – Opt Out Not Opt In
  - Considering Emerging Cyber Security Themes
    - Artificial Intelligence – Warning And Educating About Spoofing and “Knowledgeable” Parties
    - Internet of Things – Maintaining Security To Prevent Man In The Middle And Other Attacks
    - Conversational Platforms – Is It Real . . . Or Is It Memorex (For Those From the 1980s)



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## Where To Go From Here

- Insurance
  - Indemnification Versus Insurance: The Relationship Between The Two
  - Scope of Coverage
    - What Is A “Breach” And What Is Not
    - Limitations On Liability
    - “Faultless” Breaches – Recent Trends In The Industry
  - Coverage Levels



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# Q&A

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