HCCA 2018
Compliance Institute
Las Vegas, Nevada

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St. Joseph’s Hospital and Medical Center/
Dignity Health
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109 IT for the Non-IT Compliance Professional
Monday, 11:00 AM–12:00 PM
Frank Ruelas, Facility Compliance Professional, St. Joseph’s Hospital and Medical Center/Dignity Health

- Develop and broaden a practical knowledge base of IT concepts and principles and how they apply in supporting the organization’s compliance program
- Learn some of the key challenges that IT professionals face in maintaining an effective IT network within the organization, and how Compliance and IT can collaborate effectively to deal with these challenges
- Identify auditing and monitoring opportunities where IT and Compliance can partner in obtaining useful data to help assess key processes that maintain the security of the IT system

But first!

What may be THE answer to a question that may be very important to you!
Our Objectives

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Our Approach

• Focus Points
• Hardware – Computer Equipment
• Software – Applications, Programs
• Connectivity – Networks
• Users – Authorized individuals

Information

“the communication or reception of knowledge or intelligence”

Source: https://www.merriam-webster.com/dictionary/information
Technology

“the use of science in industry, engineering, etc., to invent useful things or to solve problems”

Source: http://www.learnersdictionary.com/definition/technology

5WH1

- How
- Who
- Why
- What
- When
- Where
Information Technology Consciousness

When

Why
How is Information Used?

- Communications
- Operations
- Decisions
- Records
Competitive Advantage

- Cost Leadership
- Differentiation
- Innovation
- Growth
- Strategic Alliance

Source: J. Xu and M. Quaddus, Managing Information Systems, DOI: 10.2991/978-94-91216-89-3_2, Atlantis Press 2013

From Data to Knowledge

Data | Information | Knowledge
Characteristics of Bad Data

• Communications
Characteristics of Bad Data

• Communications
• Operations

Characteristics of Bad Data

• Communications
• Operations
• Decisions
Characteristics of Bad Data

- Communications
- Operations
- Decisions
- Records

Our IT Model

Input  Processing  Output
Organizational Culture

Culture can drive priorities, strategy, business decisions.

Software

- Programming is easier
- Proliferation of devices
- Constant demand
## Speed

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>2 MHz</td>
<td>5 MHz</td>
<td>25 MHz</td>
<td>1.5 GHz</td>
<td>3.0 GHz</td>
</tr>
<tr>
<td>2,000,000/sec</td>
<td>5,000,000/sec</td>
<td>25,000,000/sec</td>
<td>1,500,000,000/sec</td>
<td>3,000,000,000/sec</td>
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<td>Midnight Cowboy</td>
<td>Kramer vs. Kramer</td>
<td>Driving Miss Daisy</td>
<td>American Beauty</td>
<td>The Hurt Locker</td>
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<tr>
<td>Bridge over Troubled Water</td>
<td>Call Me</td>
<td>Vision of Love</td>
<td>Maria, Maria</td>
<td>Tik Tok</td>
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</table>

## Hardware
## Objectives

<table>
<thead>
<tr>
<th>Practical Knowledge</th>
<th>Powerful</th>
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<tbody>
<tr>
<td></td>
<td>Diverse</td>
</tr>
<tr>
<td></td>
<td>Everywhere</td>
</tr>
<tr>
<td>Challenges</td>
<td>Accounting</td>
</tr>
<tr>
<td></td>
<td>Cost</td>
</tr>
<tr>
<td></td>
<td>Maintenance</td>
</tr>
<tr>
<td>Auditing &amp; Monitoring</td>
<td>Often limited to inventory</td>
</tr>
<tr>
<td></td>
<td>Time consuming</td>
</tr>
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</table>
An audit to consider...

Software

Types of software:
• Systems software (ex. Windows, Linux, MacOS)
• Application software (let’s look at a list...)
Software

- Word processing
- Spreadsheets
- Databases
- Graphics
- Presentation
- Integrated (Suites)

Heard of this....
Malware

- Adware
- Bot
- Ransomware
- Spyware
- Trojan Horse
- Virus

Some type of message that catches the user off guard that has something such as

“Blah, blah, blah...(gets the user’s attention...click here.”
Software
<table>
<thead>
<tr>
<th>Objective</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical Knowledge</td>
<td>• Instructions needed by computers</td>
</tr>
<tr>
<td>Challenges</td>
<td>• Patches</td>
</tr>
<tr>
<td></td>
<td>• Updates</td>
</tr>
<tr>
<td></td>
<td>• Learning Curve</td>
</tr>
<tr>
<td>Auditing &amp; Monitoring</td>
<td>• Authorized</td>
</tr>
<tr>
<td></td>
<td>• Licensed</td>
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</table>

An audit to consider...
Let’s talk about storage...

### Data Storage

<table>
<thead>
<tr>
<th>Storage</th>
<th>Sheets of Paper</th>
<th>Height</th>
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<tbody>
<tr>
<td>Kilobyte</td>
<td>1/2</td>
<td>-</td>
</tr>
<tr>
<td>Megabyte</td>
<td>500</td>
<td>3 inches</td>
</tr>
<tr>
<td>Gigabyte</td>
<td>500,000</td>
<td>250 feet</td>
</tr>
<tr>
<td>Terabyte</td>
<td>500,000,000</td>
<td>47 miles</td>
</tr>
</tbody>
</table>
...and where is storage media?

So how can we clean it up and how?
Input Devices

Most Common:
• Keyboard
• Mouse
• Touchscreen
Input Devices

Most Common:
• Keyboard
• Mouse
• Touchscreen

Other Input Devices
• Speech recognition
• Digital devices (example: cameras)
• Optical data readers
• Magnetic strip readers
• Radio Frequency Identification (RFI)
Input can also include Computer to Computer

Often done automatically on a routine or ongoing basis or schedule.

Output Devices

- Monitors
- Types
- Number
- Printers
- Electronic files
Common Formats

• Let’s talk about file extensions
• Name + extension = filename
  • Word = .docx
  • Excel = .xls
  • PowerPoint = .ppt

...and some very interesting “all purpose” extensions.

Some file formats lend themselves to “sharing”....
Generic (txt, csv) to Excel

Sales Report for Jan 20XX

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<thead>
<tr>
<th>Salesperson</th>
<th>Sales Region</th>
<th>Monthly Sales</th>
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<tbody>
<tr>
<td>Thomas</td>
<td>Northwest</td>
<td>$10,000</td>
</tr>
<tr>
<td>Betty</td>
<td>East</td>
<td>$20,000</td>
</tr>
<tr>
<td>James</td>
<td>West</td>
<td>$15,000</td>
</tr>
<tr>
<td>Mike</td>
<td>Northwest</td>
<td>$10,000</td>
</tr>
<tr>
<td>Cynthia</td>
<td>West</td>
<td>$10,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Salesperson</td>
<td>Sales Region</td>
</tr>
<tr>
<td>2</td>
<td>Thomas Smith</td>
<td>Northwest</td>
</tr>
<tr>
<td>3</td>
<td>Betty Wilson</td>
<td>East</td>
</tr>
<tr>
<td>4</td>
<td>James Smith</td>
<td>West</td>
</tr>
<tr>
<td>5</td>
<td>Mike Adamson</td>
<td>Northwest</td>
</tr>
<tr>
<td>6</td>
<td>Cynthia Jones</td>
<td>West</td>
</tr>
</tbody>
</table>

An Important Object: The Database

- Design
- Input and cleanup
- Changes and edits
- Popularity
And of course...

The Query

The Cloud
Cloud Computing

• Accessibility
Cloud Computing

• Accessibility
• Scalability

Cloud Computing

• Accessibility
• Scalability
• Infrastructure
Cloud Computing

- Accessibility
- Scalability
- Infrastructure
- Reliability
Privacy

- Common expectations
- Need to clarify
- Industry related requirements

Employee Related Privacy

- Email
- Messaging
- Network Use
- File management
All right...let's see what folks have to say.