Protecting You & Your Practice from Cyber Attackers & AI

Steve McEvoy
May 6th, 2024

AAO 2024 New Orleans

Hey Steve – where are all the graphics?

I've stripped most of the graphics out of the talk since I can be 100% sure they are royalty free.

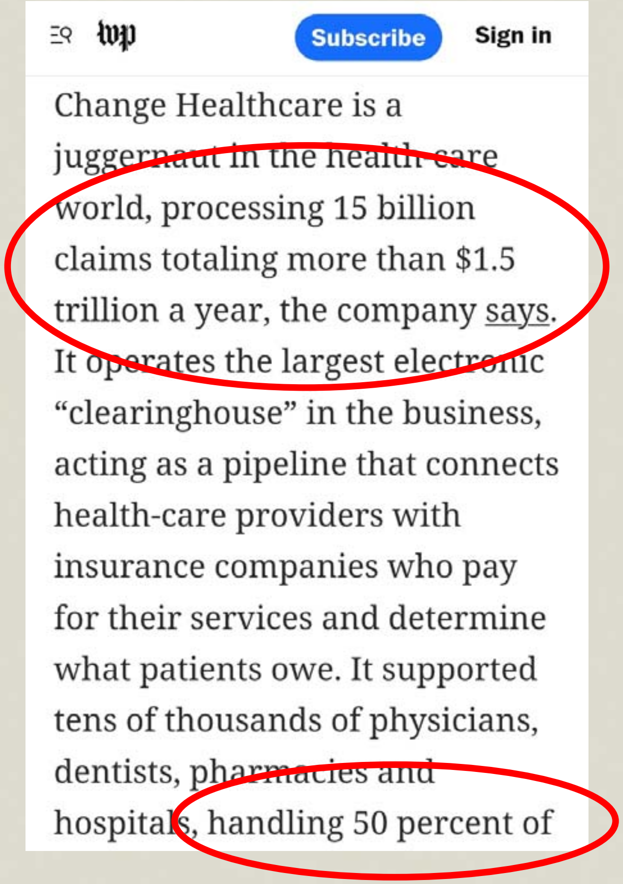
The discussion points are still here and should be what you need.

The Internet has some scary s**t going on

This is a self defense course

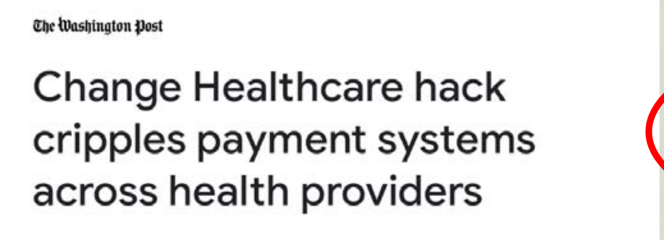
What Cyber Incident in the last few weeks is affecting your Practice?

United Healthcare Group Attack



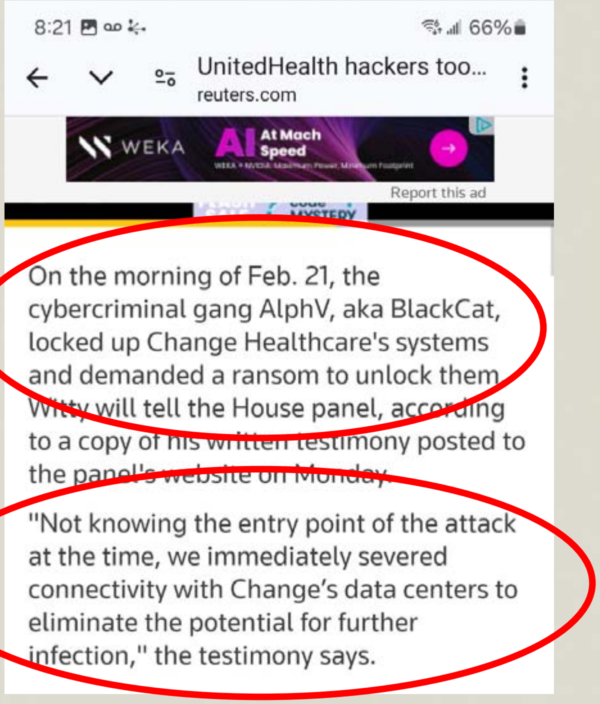
Change Healthcare is a juggernaut in the health-care world, processing 15 billion claims totaling more than $1.5 trillion a year, the company says. It operates the largest electronic "clearinghouse" in the business, acting as a pipeline that connects health-care providers with insurance companies who pay for their services and determine what patients owe. It supported tens of thousands of physicians, dentists, pharmacies and hospitals, handling 50 percent of

United Healthcare Group Attack



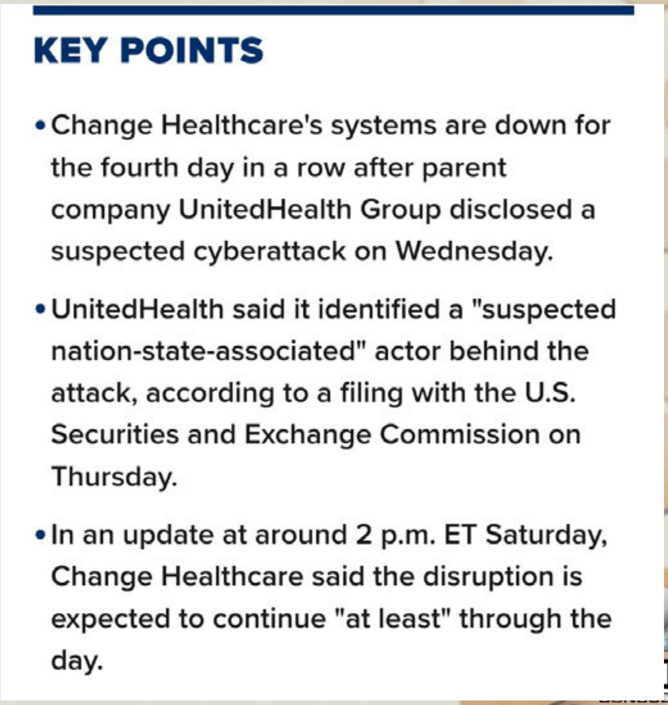
The Washington Post

Change Healthcare hack cripples payment systems across health providers



On the morning of Feb. 21, the cybercriminal gang AlphV, aka BlackCat, locked up Change Healthcare's systems and demanded a ransom to unlock them, Witty will tell the House panel, according to a copy of his written testimony posted to the panel's website on Monday.

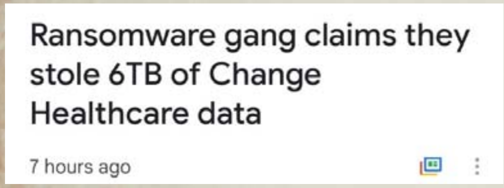
"Not knowing the entry point of the attack at the time, we immediately severed connectivity with Change's data centers to eliminate the potential for further infection," the testimony says.



KEY POINTS

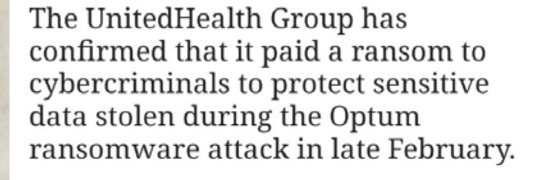
- Change Healthcare's systems are down for the fourth day in a row after parent company UnitedHealth Group disclosed a suspected cyberattack on Wednesday.
- UnitedHealth said it identified a "suspected nation-state-associated" actor behind the attack, according to a filing with the U.S. Securities and Exchange Commission on Thursday.
- In an update at around 2 p.m. ET Saturday, Change Healthcare said the disruption is expected to continue "at least" through the day.

United Healthcare Group Attack

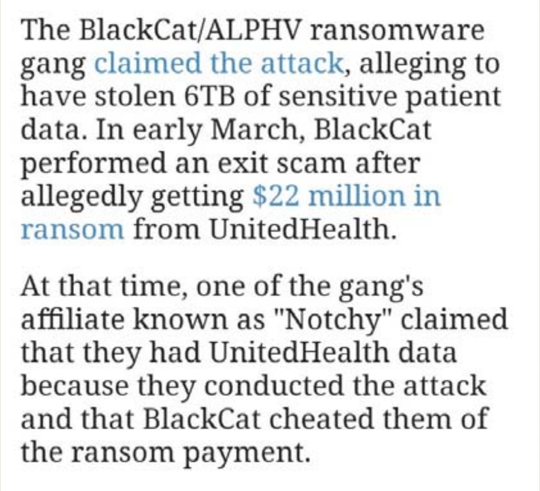


Ransomware gang claims they stole 6TB of Change Healthcare data

7 hours ago

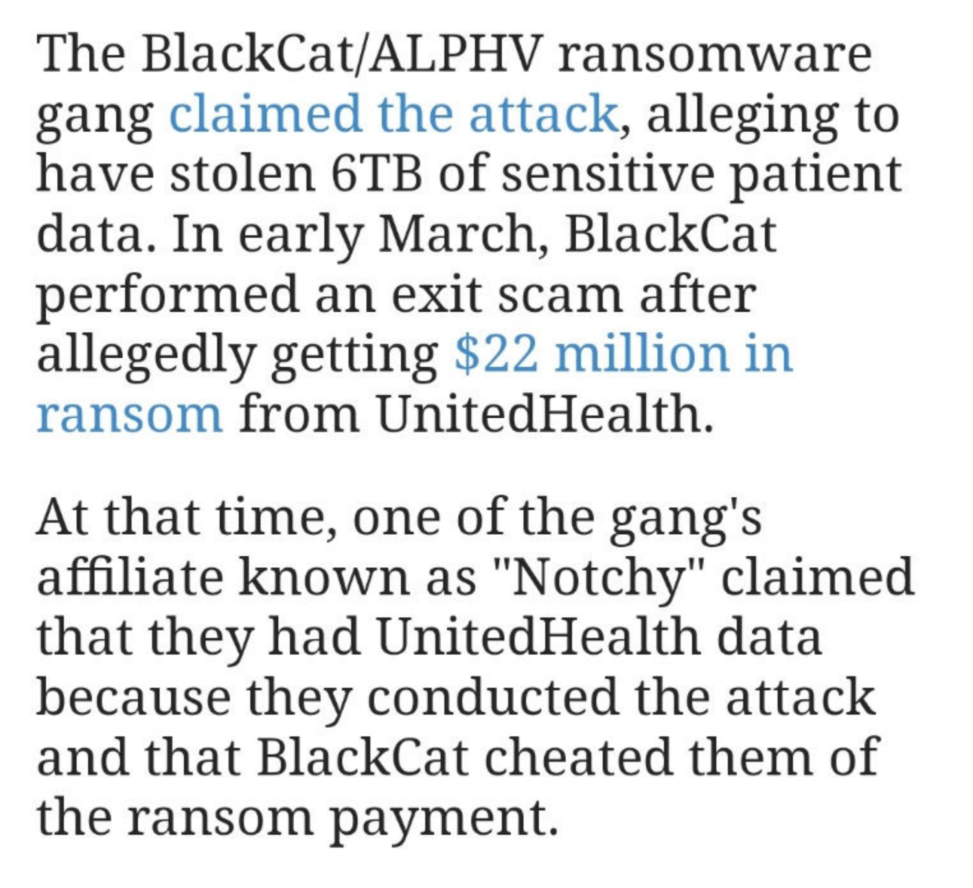


The UnitedHealth Group has confirmed that it paid a ransom to cybercriminals to protect sensitive data stolen during the Optum ransomware attack in late February.



The BlackCat/ALPHV ransomware gang claimed the attack, alleging to have stolen 6TB of sensitive patient data. In early March, BlackCat performed an exit scam after allegedly getting $22 million in ransom from UnitedHealth.

At that time, one of the gang's affiliate known as "Notchy" claimed that they had UnitedHealth data because they conducted the attack and that BlackCat cheated them of the ransom payment.



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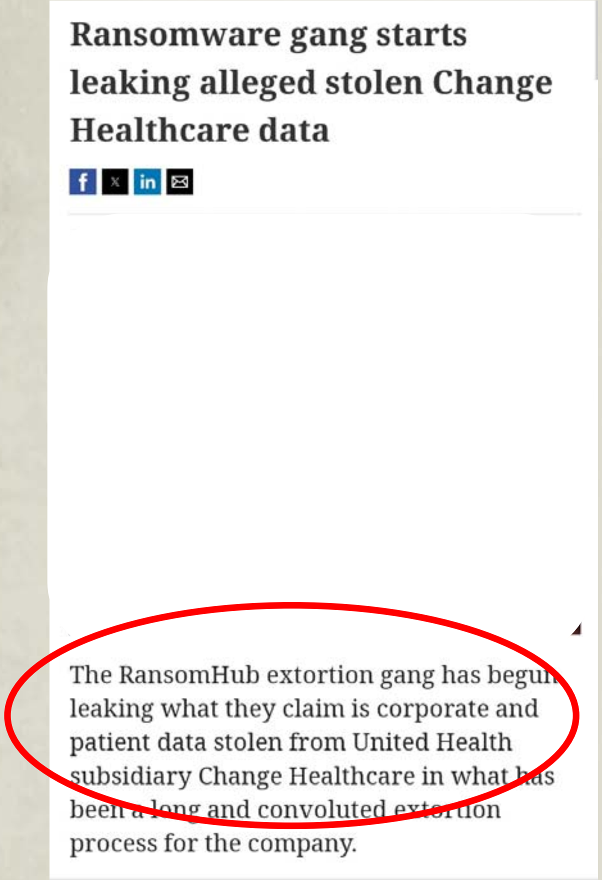
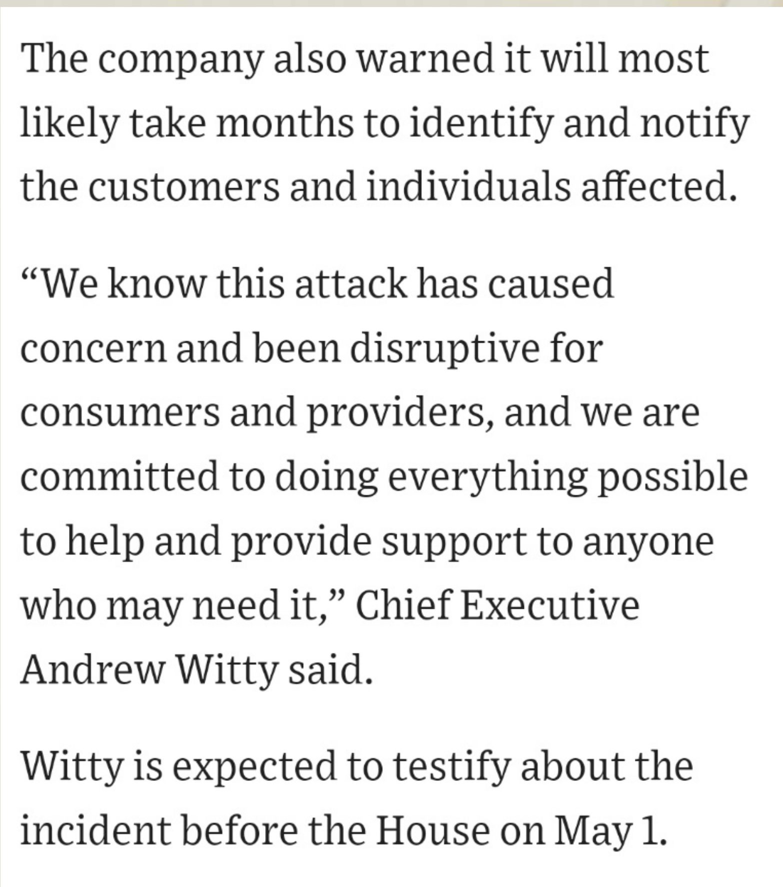
United Healthcare Group Attack



Ransomware gang starts leaking alleged stolen Change Healthcare data

The RansomHub extortion gang has begun leaking what they claim is corporate and patient data stolen from United Health subsidiary Change Healthcare in what has been a long and convoluted extortion process for the company.

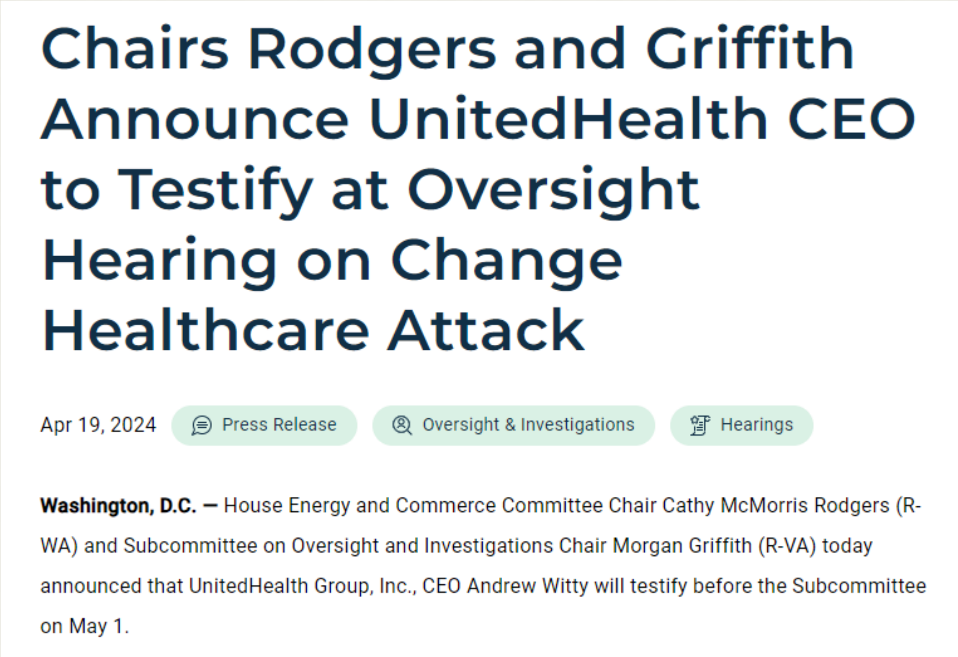


The company also warned it will most likely take months to identify and notify the customers and individuals affected.

“We know this attack has caused concern and been disruptive for consumers and providers, and we are committed to doing everything possible to help and provide support to anyone who may need it,” Chief Executive Andrew Witty said.

Witty is expected to testify about the incident before the House on May 1.

United Healthcare Group Attack

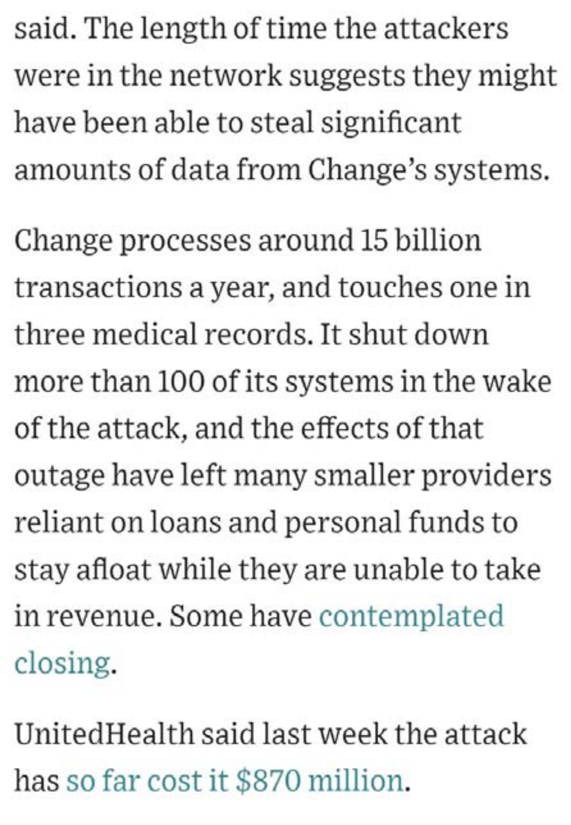


Chairs Rodgers and Griffith Announce UnitedHealth CEO to Testify at Oversight Hearing on Change Healthcare Attack

Apr 19, 2024 Press Release Oversight & Investigations Hearings

Washington, D.C. — House Energy and Commerce Committee Chair Cathy McMorris Rodgers (R-WA) and Subcommittee on Oversight and Investigations Chair Morgan Griffith (R-VA) today announced that UnitedHealth Group, Inc., CEO Andrew Witty will testify before the Subcommittee on May 1.

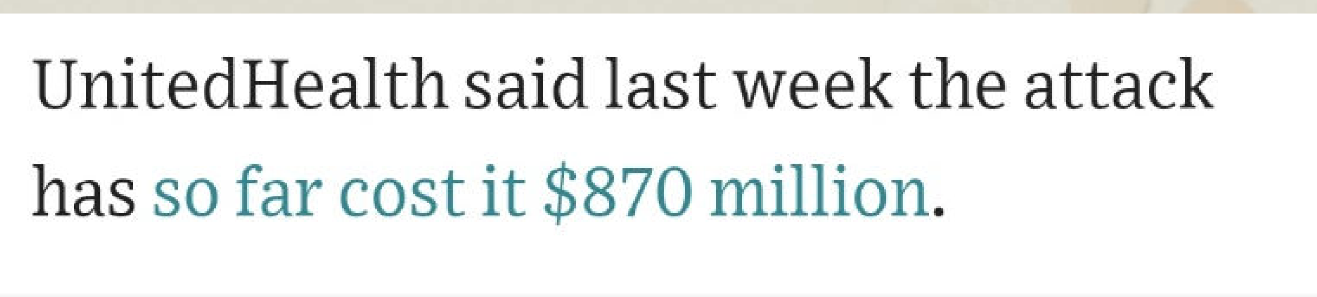
United Healthcare Group Attack



said. The length of time the attackers were in the network suggests they might have been able to steal significant amounts of data from Change's systems.

Change processes around 15 billion transactions a year, and touches one in three medical records. It shut down more than 100 of its systems in the wake of the attack, and the effects of that outage have left many smaller providers reliant on loans and personal funds to stay afloat while they are unable to take in revenue. Some have contemplated closing.

UnitedHealth said last week the attack has so far cost it $870 million.



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LLM

npr

Large Language Model (LLM)

['lärj 'laŋ-gwij 'mä-dᵊl]

A deep learning algorithm that's equipped to summarize, translate, predict, and generate human-sounding text to convey ideas and concepts.

Popular LLM's

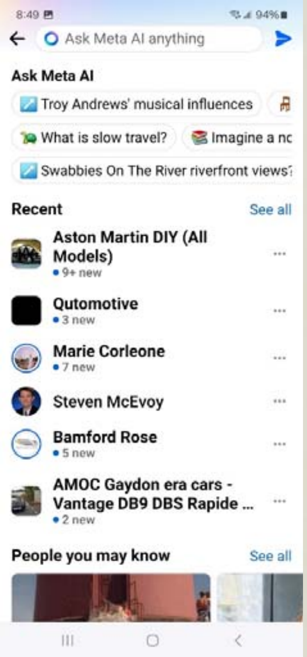
AI Closer at Hand

- Chat GPT is a product of OpenAI.com
  - www.OpenAI.com

- Free accounts as well as paid

AI Closer at Hand

- Meta AI is from Facebook
- Embedded in Mobile App



8:49 94%

Ask Meta AI anything

Ask Meta AI

Troy Andrews' musical influences

What is slow travel?

Imagine a nc

Swabbies On The River riverfront views?

Recent See all

Aston Martin DIY (All Models)
• 9+ new

Qutomotive
• 3 new

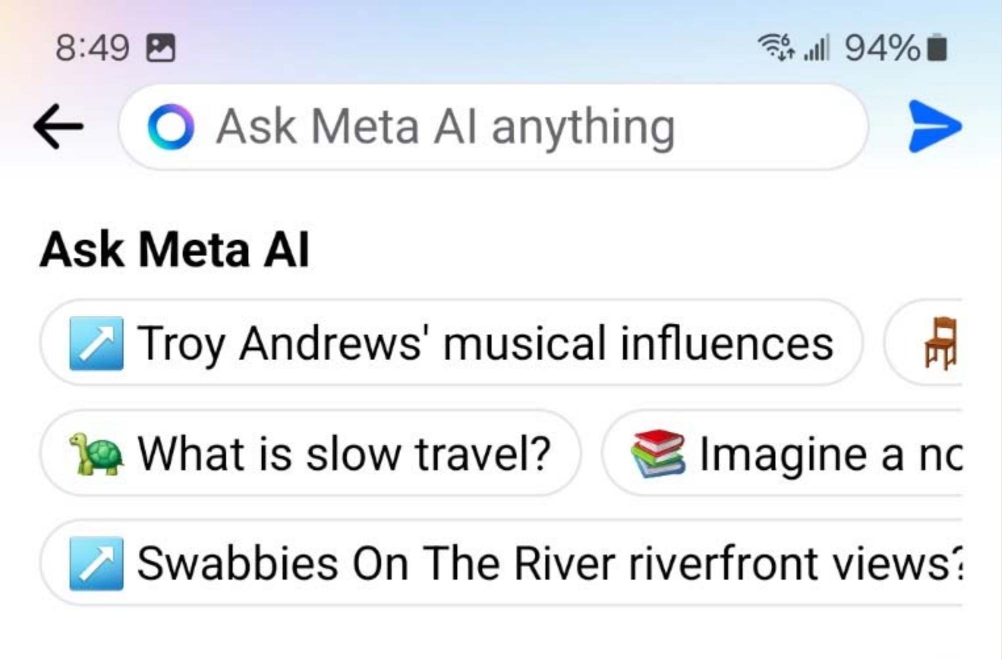
Marie Corleone
• 7 new

Steven McEvoy

Bamford Rose
• 5 new

AMOC Gaydon era cars - Vantage DB9 DBS Rapide ...
• 2 new

People you may know See all



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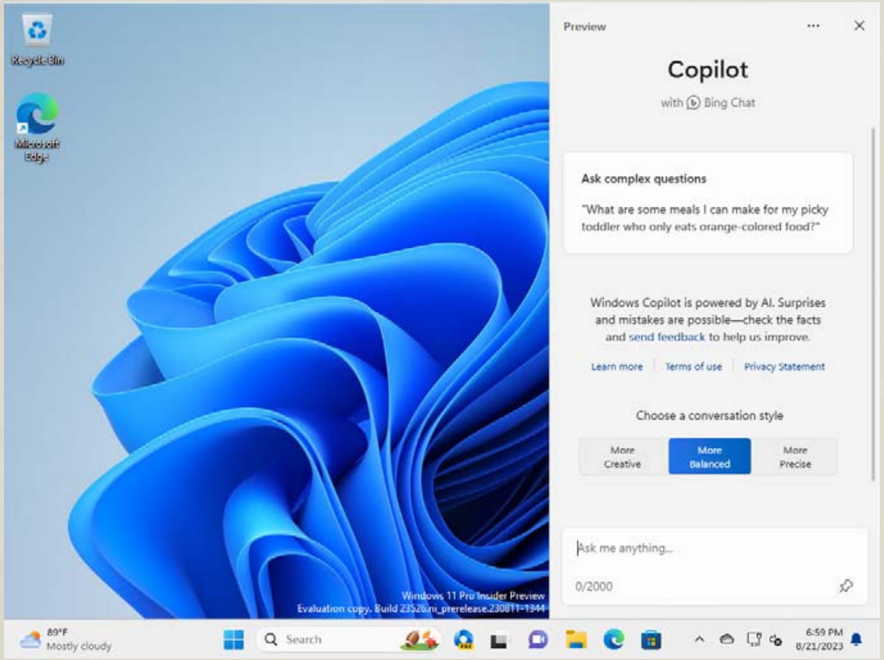
AI Closer at Hand

- Microsoft Copilot
- On Toolbar in Windows 11 PCs

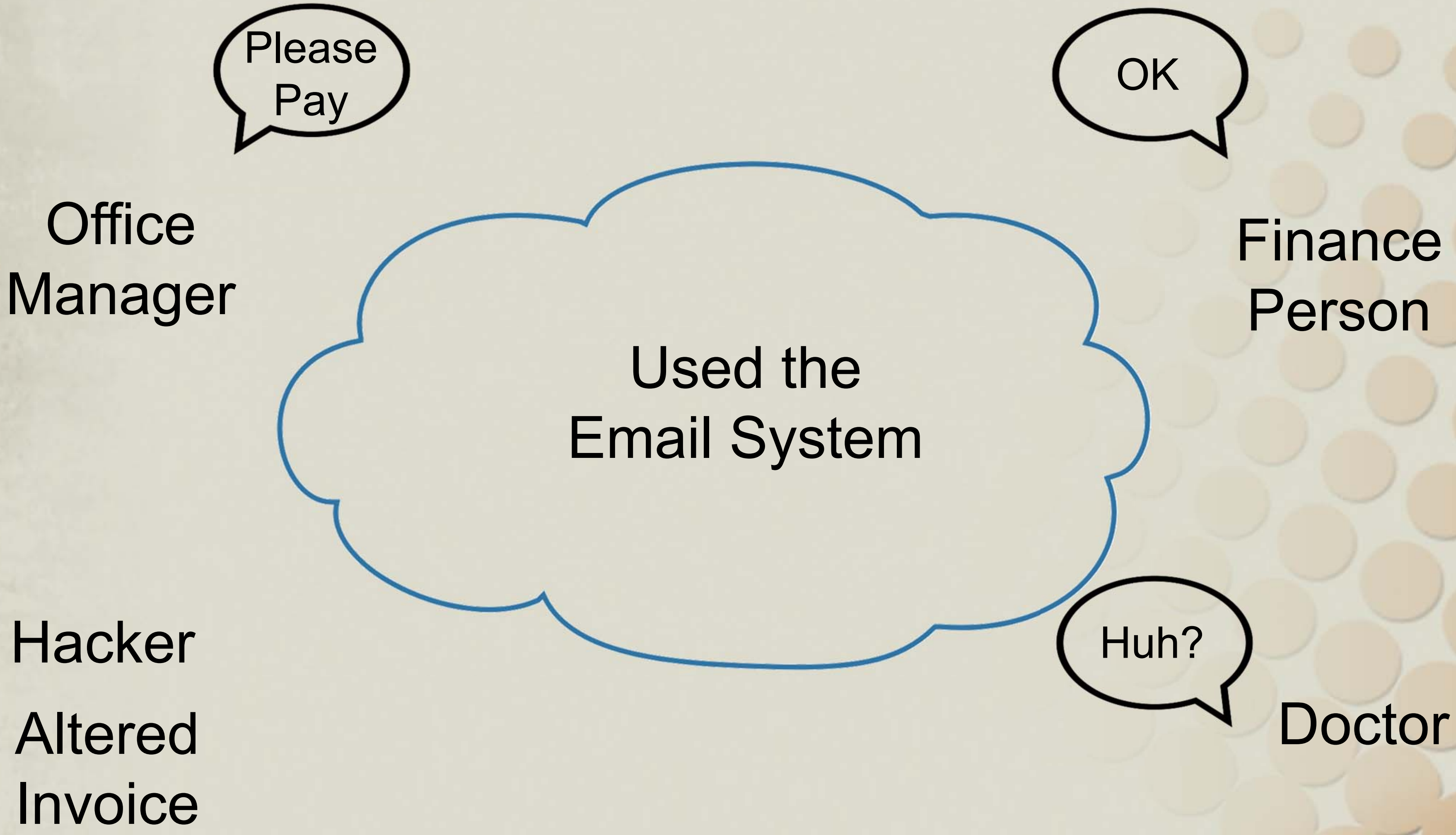


Ask complex questions

"What are some meals I can make for my picky toddler who only eats orange-colored food?"

Windows Copilot is powered by AI. Surprises and mistakes are possible—check the facts and send feedback to help us improve.

Let me tell you a story …



Please Pay

Office Manager

OK

Finance Person

Used the Email System

Hacker

Altered Invoice

Huh?

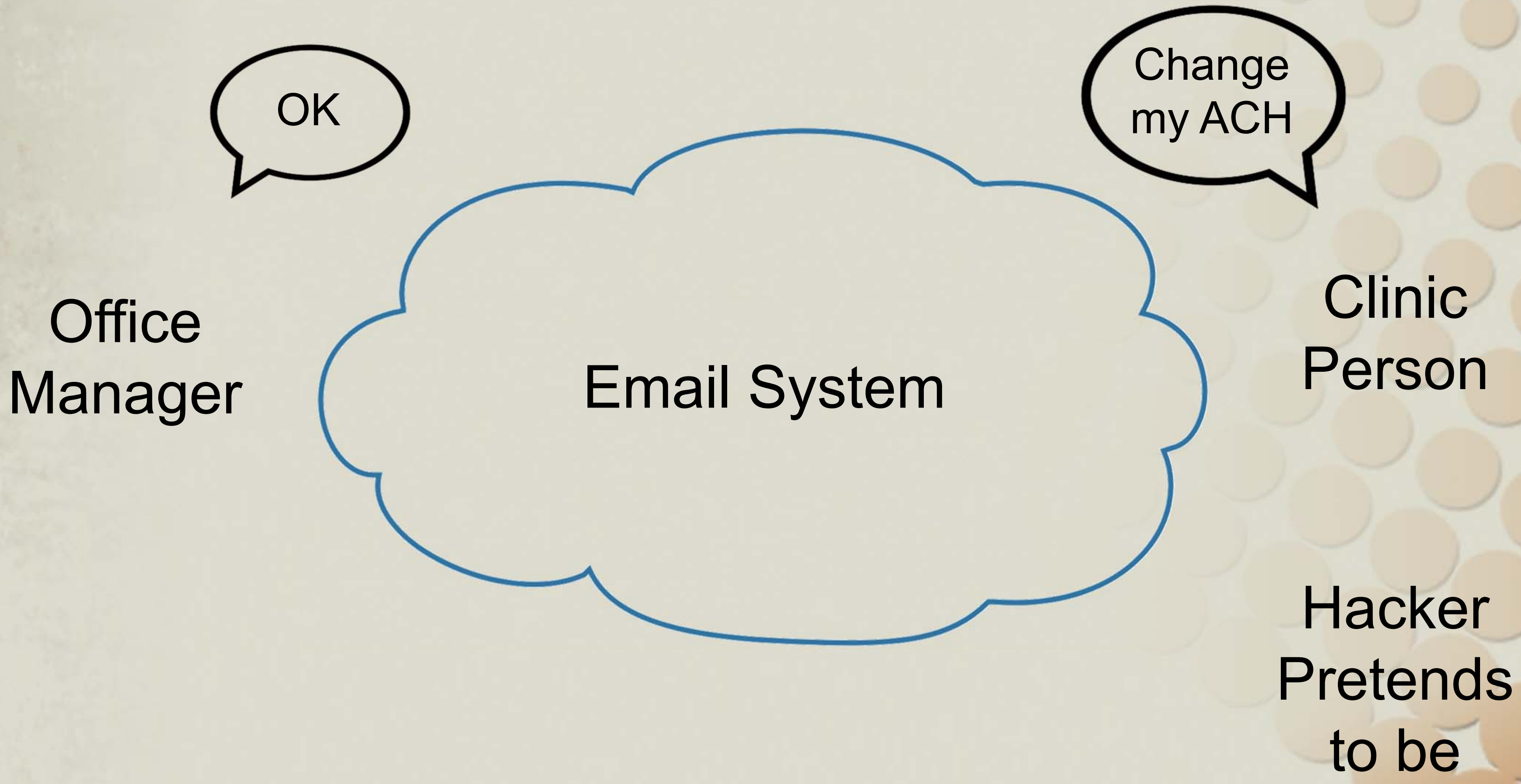
Doctor

Technology Fails

- Manager Reused Password
- MFA Not Enabled for email accounts
- Geo-Blocking not enabled
  - (Hacker was in Sweden)

Size of the Haul?

About $1,000



OK

Office Manager

Email System

Change my ACH

Clinic Person

Hacker Pretends to be

Technology Fails

- Clinic User Reused Password
- MFA Not Enabled for email accounts

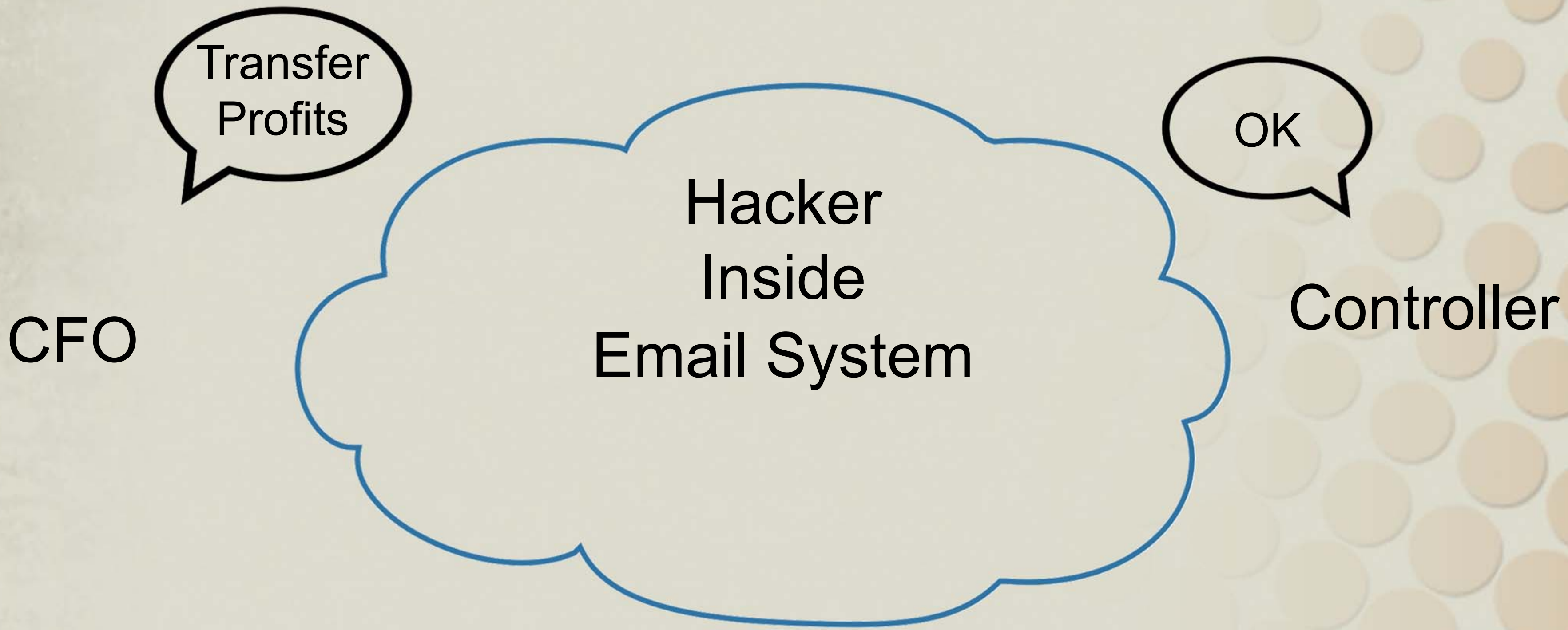
Size of the Haul?

About $5,000

Just one more …

Size of the Haul?

About $800,000!



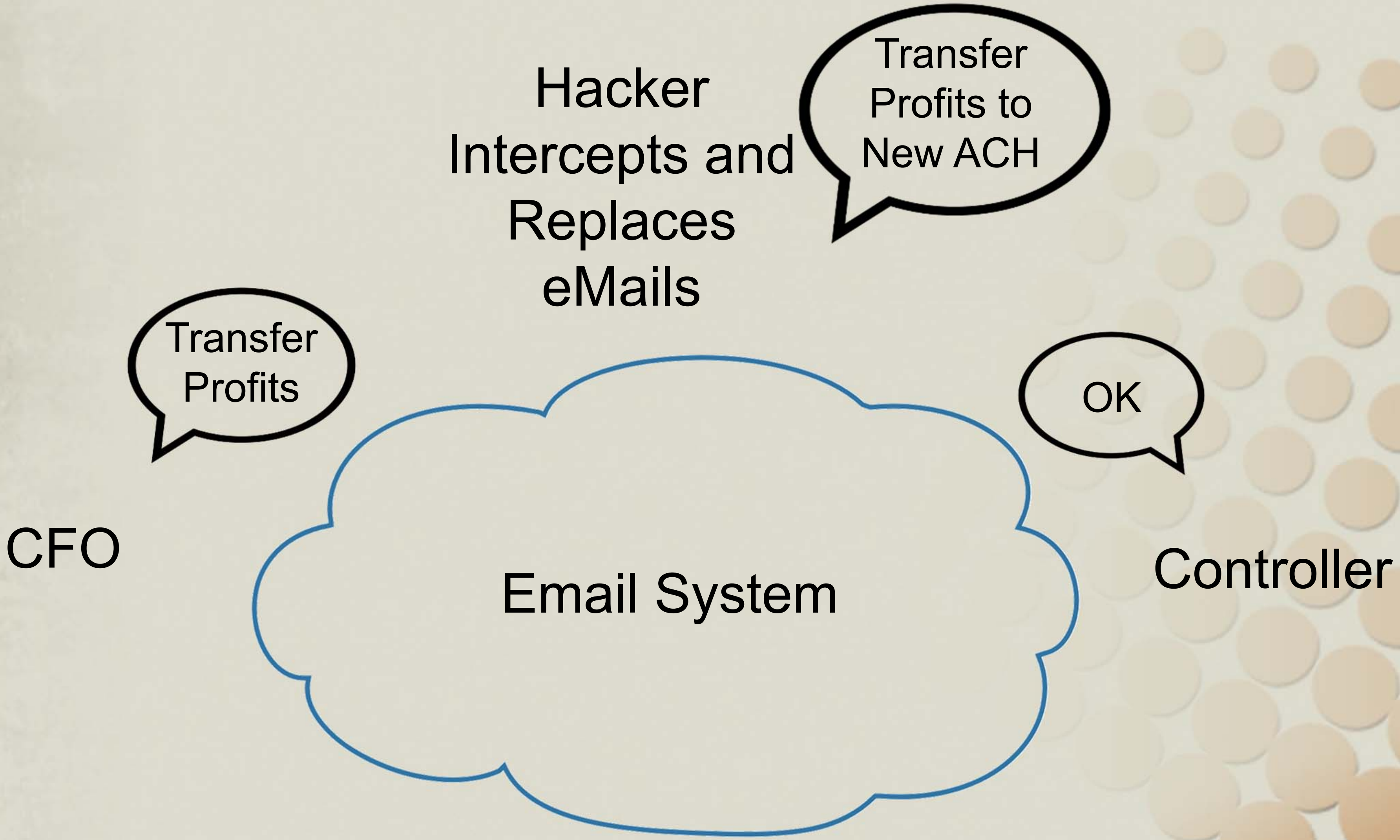
Transfer Profits

CFO

Hacker Inside Email System

OK

Controller



Hacker Intercepts and Replaces eMails

Transfer Profits to New ACH

Transfer Profits

OK

CFO

Email System

Controller

Solution for All Three Events?

- No New Technology Required!

- Free!

- Almost no Training Required

- Can be implemented TODAY!

Solution for All Three Events

Use the Phone!

Financial Change Policy

- Any change in a payment process needs verbal confirmation with the requestor
  - New vendor
  - New account
  - Change of money flow of any kind

- Independent confirmation by the person processing the change
  - You call them to verify

Security's Weakest Link?

People

Phishing

The old Nigerian Prince Scams

Spear Phishing

They know something specific about you to make the scam more convincing

Meet Dr. Thomas & Team

vs.

What can we learn just from the Web?

- ThomasOrthodontics.com
- Thomas Orthodontic
- Dr. Larry Thomas
- California Office
- Orthodontic Practice
- Windows Computers
- iCat CBCT X-ray machine

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And with a bit more research …

- Dexis Imaging makes the iCat
- Dexis support of iCat is in Philadelphia

DEXIS™

And now for the attack …

I wanted to:

- Get access to a computer
- Copy software to it
- Run the software
- Copy data from the network

And now for the attack…

Video of me pretending to be the bad guy. Check the YouTube Link posted where you downloaded this presentation

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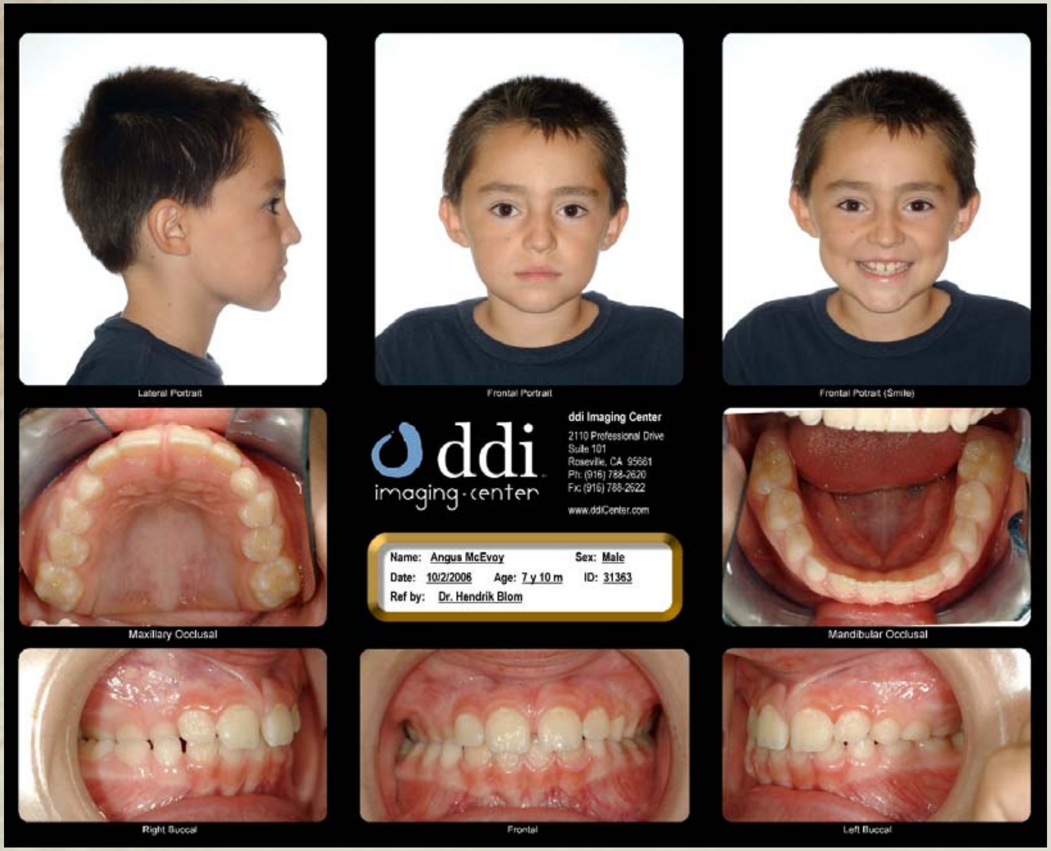
With about 15 minutes of time invested …

- Got a staff member to click on a link
- Accessed Patient Information
- Copied software to a computer in the office and ran an application
- Gathered information about their network
- Copied information out of their office

What could they have done?

- Question the validity
- Ask Dr. Thomas if he asked for this
- Call them back
- Never let a stranger onto you computer or device (ever!)
- Make it your IT persons problem

Meet Dr. Thomas & Team
Meet Dr. Camille and Hilarin



ddi imaging·center

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Suite 101
Roseville, CA 95661
Ph: (916) 788-2620
Fx: (916) 788-2622
www.ddiCenter.com

Name: Angus McEvoy Sex: Male
Date: 10/2/2006 Age: 7 y 10 m ID: 31363
Ref by: Dr. Hendrik Blom

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Camille and Hilari

MidJourney
Graphic AI

What can you trust?

So far AI has impacted our trust of:

- Written text
- Graphics

What else?

- How about when I said **“talk to the Doctor?”**

What would you do?

Robotic Sounding Audio Clip generated by Microsoft Word Text to Speech Tool.

Wouldn’t fool many people.

What would you do?

AI generated Steve voice that sounds about 95% right, but still faintly noticeable clues.

Then, when heard as a voicemail message where it is even more crude audio you can’t really tell.

Original

via Vmail

AI Audio ‘Deep Fake’

Live demo of doing an actual audio deep fake where I replicate Dr. Aaron Molen’s voice (with permission) that I skimmed off YouTube and then turned into a cloned voice.

Then I made a recording of him asking his finance person to ACH transfer funds for a new Xray Machine he saw at the AAO show

Positive Users for AI Voice Generation

- Voice impaired people
- Podcasters
- Training Materials
- Phone system recordings at the office

So, what to do about it?

- Enhance your Financial Change Policy
  - Live voice only

- Consider having a code word to approve requests
  - Never put this code in an electronic message like text, email or voice mail (hackers could be listening)

Takeaways…..

- Financial Change Policy that includes a live discussion and code word
- Use MFA for all your email accounts
- Be skeptical of any inbound initiated call that requests information or access to a computer
  - Default to NO unless you confirm
- Explore using AI for positives within the Practice
- Consider putting your Team through Cyber awareness training each year

Thank You!

Presentation online at
www.mmeconsulting.com/Presentations

steve@mmeconsulting.com

Come visit me at Booth 1709

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Technology Planning and Integration for Dental Specialists