



Evidence Solutions, Inc.

And

The Maricopa County Bar Association

Present:

Computer Forensics in Fraud Investigations

January 5, 2018

Osborn Maledon  
2929 N. Central Avenue  
21st Floor  
Phoenix, AZ 85012.

Presented by:

Scott Greene, SCFE, CEO  
Evidence Solutions, Inc.

An Arizona Based Computer Forensics Company

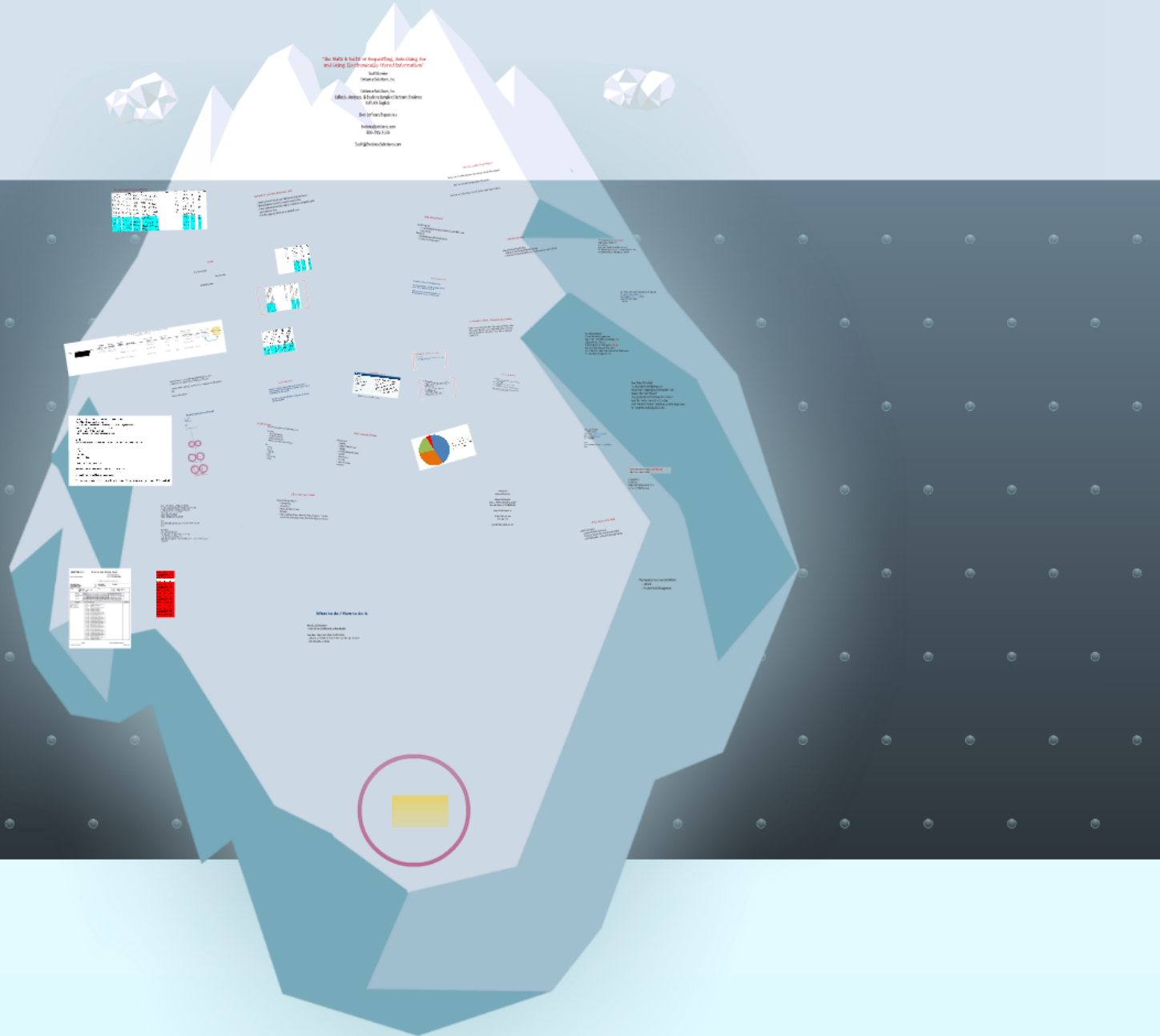
“Digital Evidence in Plain English”

866-795-7166

[Email Scott Greene, Senior Computer Forensics Examiner](mailto:Scott@EvidenceSolutions.com)

[Scott@EvidenceSolutions.com](mailto:Scott@EvidenceSolutions.com)

[www.EvidenceSolutions.com](http://www.EvidenceSolutions.com)



**"The Nuts & Bolts of Requesting, Searching For  
and Using Electronically Stored Information".**

**Scott Greene  
Evidence Solutions, Inc.**

**Evidence Solutions, Inc.  
Collects, Analyzes, & Explains Complex Electronic Evidence  
In PLAIN English.**

**Over 30 Years Experience**

**EvidenceSolutions.com  
866-795-7166**

**Scott@EvidenceSolutions.com**

## Electronically Stored Information in Litigation

Frequently we are presented with data that appears perfectly normal and supports a particular side to a case. Unfortunately software, by its very nature, displays data not in its natural form but rather in a sorted and organized form.



# Electronically Stored Information in Litigation

## What you don't see:

- Data that has been manipulated will not be evident when looking at reports generated by the reporting system.

## Metadata:

- Data about (the) Data
- Information stored inside the electronic evidence that tells you more about the information that is presented than meets the eye.
- Who entered the data
- Who last edited the data
- How many versions of the document have there been
- Where the photo was taken
- What kind of camera took the photo
- What version of AutoCAD created the document
- What version of Outlook created the email

How am I going to get there?

Review a Civil Case where data was manipulated in a medical billing system

Show how data can be manipulated in EMR systems

Review a Civil Case where Email was Fabricated.

# Case Background

## Plaintiff Company:

Contracted to bill for a high end medical specialist with his own surgical facility.

## Maintained:

- That they properly billed for all services.
- The did so in a timely manner.

# Case Background

## Defendant Doctor/Surgical Facility

- Maintained that the Plaintiff did not bill timely
- Determined that the Plaintiff chose to concentrate on the large ticket bills

## Case BS ( Before Scott )

**Procedural issues of the billing dispute**

**Discovery disputes – billing company claimed that it didn't have certain data**

**Arbitrator failed to order production of billing software until eve of arbitration**

## Special Master Tasks

**Evidence Solutions was tasked with analyzing the software and determining what standard reports were available from the system**

**Unable to get the software running we decided to look at the data.**

# The first report from the database.

Recno	Claim	Idnum	Date	Type	Note
12966	3167	1279	01/14/09	PRIMARY	PRIMARY CLAIM PRINTED
12967	3216	1279	01/14/09	PRIMARY	PRIMARY CLAIM PRINTED
12968	1249	774	01/14/09	SECONDARY	SECONDARY CLAIM PRINTED
12969	1246	774	01/14/09	SECONDARY	SECONDARY CLAIM PRINTED
12970	1541	845	01/14/09	PRIMARY	PRIMARY CLAIM PRINTED
12971	3221	1369	01/14/09	PRIMARY	PRIMARY CLAIM PRINTED
12972	3084	1369	01/14/09	PRIMARY	PRIMARY CLAIM PRINTED
12973	1778	968	01/14/09	PRIMARY	PRIMARY CLAIM PRINTED
12974	1333	818	01/14/09	PRIMARY	PRIMARY CLAIM PRINTED
12975	2849	1295	01/14/09	PRIMARY	PRIMARY CLAIM PRINTED
12976	2858	1304	01/14/09	PRIMARY	PRIMARY CLAIM PRINTED
12977	1392	830	01/14/09	PRIMARY	PRIMARY CLAIM PRINTED
12978	1834	485	02/18/09	PRIMARY	PRIMARY CLAIM PRINTED
12979	1692	485	02/18/09	RECEIPT	CLAIM RECEIPT PRINTED
12980	1692	485	02/18/09	PRIMARY	PRIMARY CLAIM PRINTED
12981	2201	878	02/26/09	RECEIPT	CLAIM RECEIPT PRINTED
12982	280	231	12/31/06	STATEMENT	STATEMENT PRINTED >120
12983	283	243	12/31/06	STATEMENT	STATEMENT PRINTED >120
12984	272	209	12/31/06	STATEMENT	STATEMENT PRINTED >120
12985	1799	980	12/31/06	STATEMENT	STATEMENT PRINTED >120
12986	1871	980	12/31/06	STATEMENT	STATEMENT PRINTED >120
12987	1897	987	12/31/06	STATEMENT	STATEMENT PRINTED >120
12988	1966	987	12/31/06	STATEMENT	STATEMENT PRINTED >120
12989	3282	1416	12/31/06	STATEMENT	STATEMENT PRINTED 31-60






Claims with No Payment Detail Report (nopay)  
Sorted by 'Claim'.

Patient	Claim Date	Claim Dateent	Claim Number	Provider	Procedure Amount
75	02/22/05	04/13/05	77	B	3,500.00
77	04/13/05	04/13/05	79	B	12,500.00
Total for: April					16,000.00
Grand Total for Report:					16,000.00

mentclaims).

Payment Amount	%	Adjustment or Writeoff Amount	%	Write off Date	Activity Dateent
0.00	0.0	-3,500.00	100.0	09/27/05	09/27/05
0.00	0.0	-12,500.00	100.0	12/31/06	05/14/09
0.00		-16,000.00			
0.00	0.0	-16,000.00	100.0		



Hospital systems are a focal point in many Medical Malpractice cases.  
A common mis-conception is that the “Audit Log” is the gospel.

Unfortunately the “Audit Log” is just Data. It can be manipulated just like any other data.

Don't trust the software.

# Data Being Written to the EMR

Mr. Scott Greene  
Box 42047  
Tucson, Az 85733

Dr. Jones  
PCP

Date of Last Visit: 3/5/2013



Mr. Scott Greene  
Box 42047  
Tucson, Az 85733

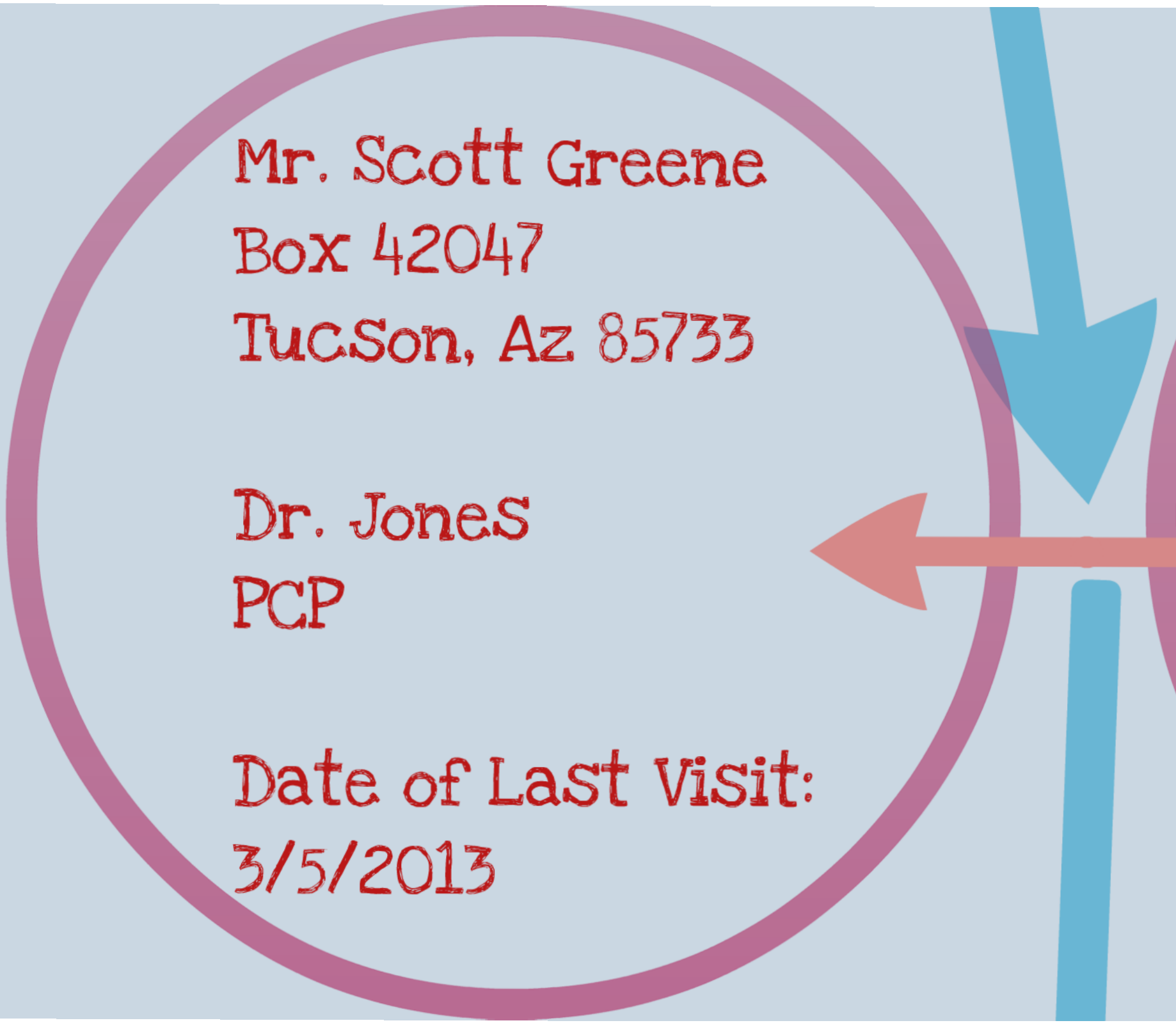
Dr. Jones  
PCP

Date of Last Visit:  
3/5/2013

#### Audit Log

Record	Field	From	To
5674565	First		Scott
5674566	Last		Greene
5674567	Address		Box 42047
5674568	City		Tucson
5674569	State		Az
5674570	PCP		Dr. Jones
5674571	Visit		3/5/2013

Create initial data



Mr. Scott Greene  
Box 42047  
Tucson, Az 85733

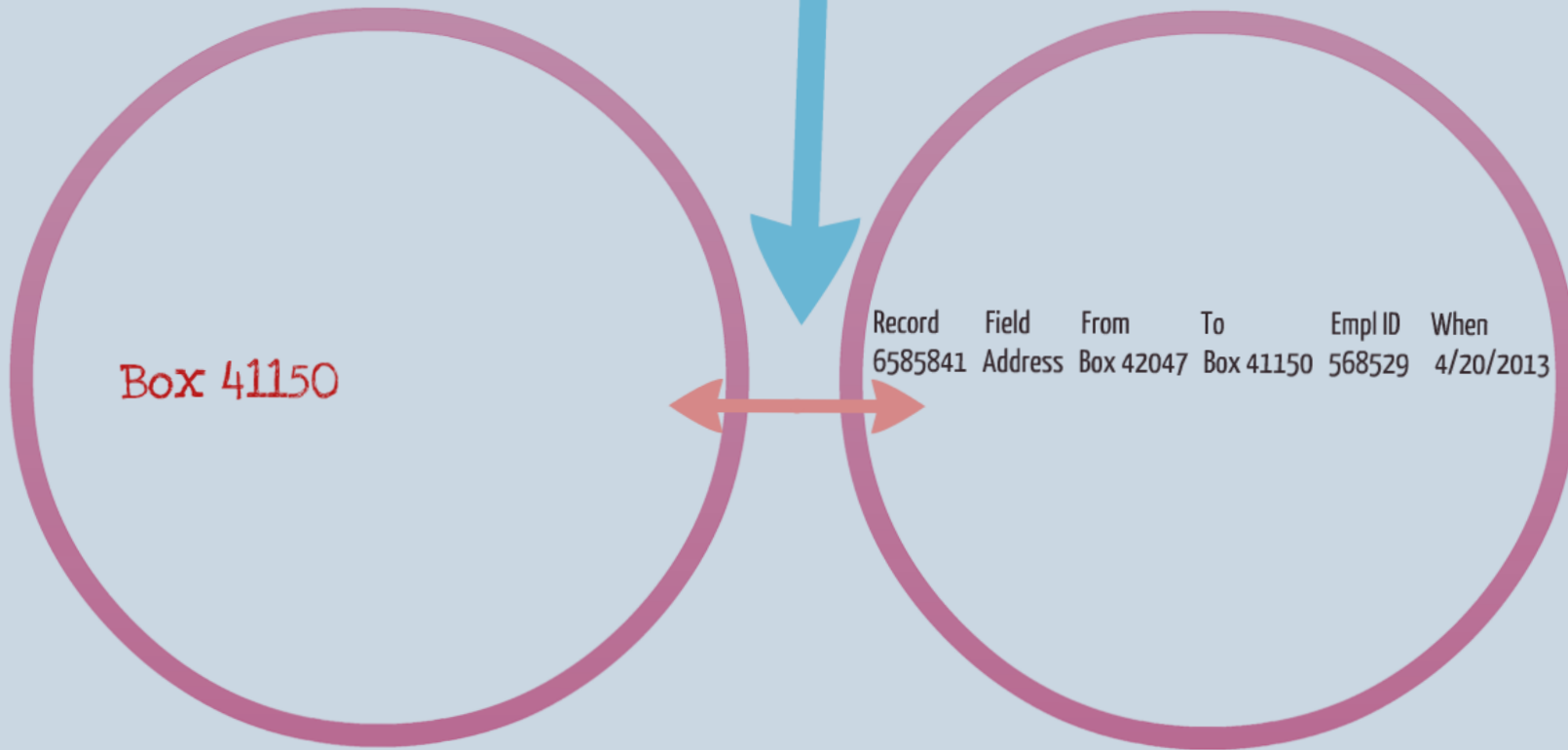
Dr. Jones  
PCP

Date of Last Visit:  
3/5/2013

## Audit Log

Record	Field	From	To
5674565	First		Scott
5674566	Last		Greene
5674567	Address		Box 42047
5674568	City		Tucson
5674569	State		Az
5674570	PCP		Dr. Jones
5674571	Visit		3/5/2013





## Single Data Field Edit

Arizona Computer Forensics Expert

Maricopa County Bar Association

Metadata Expert Witness

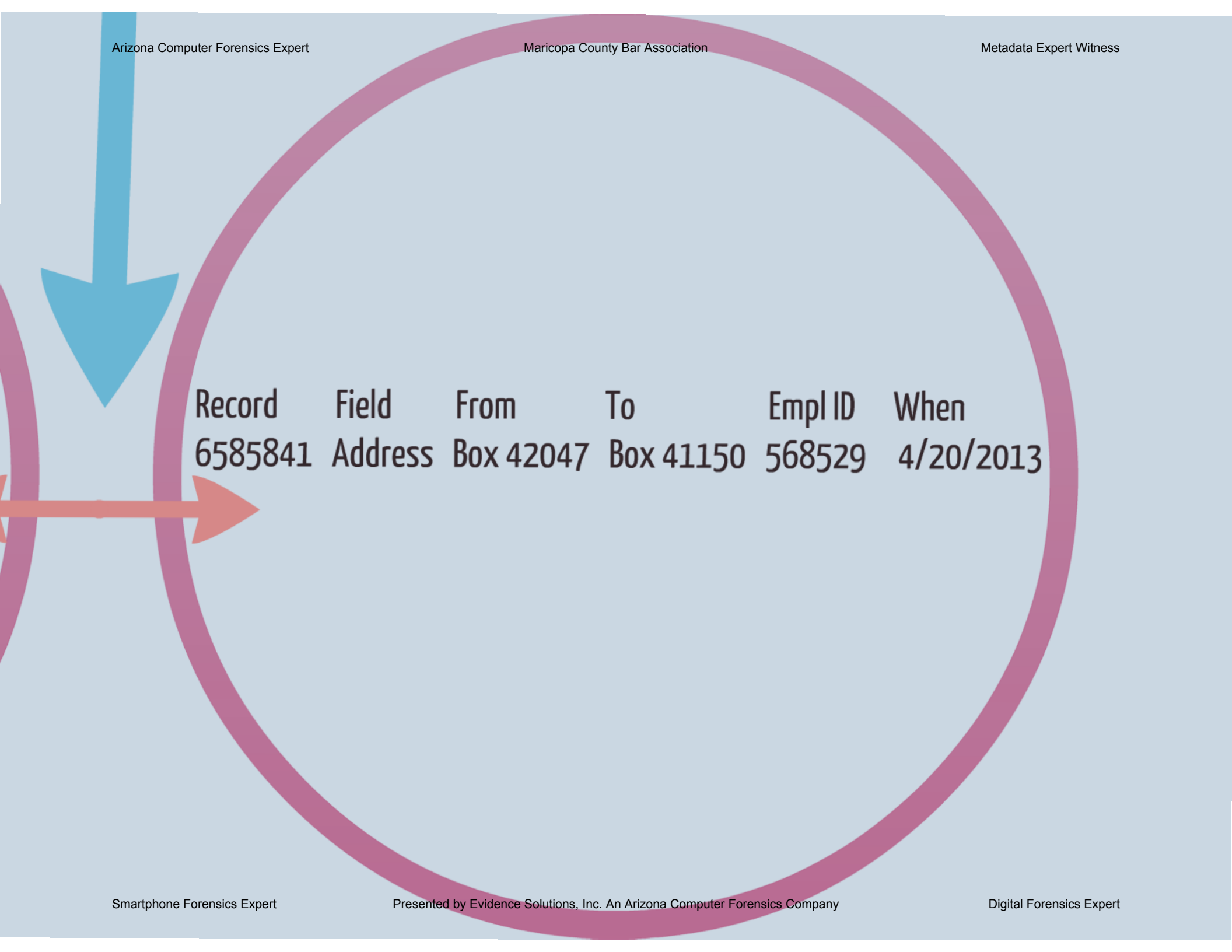
Box 41150



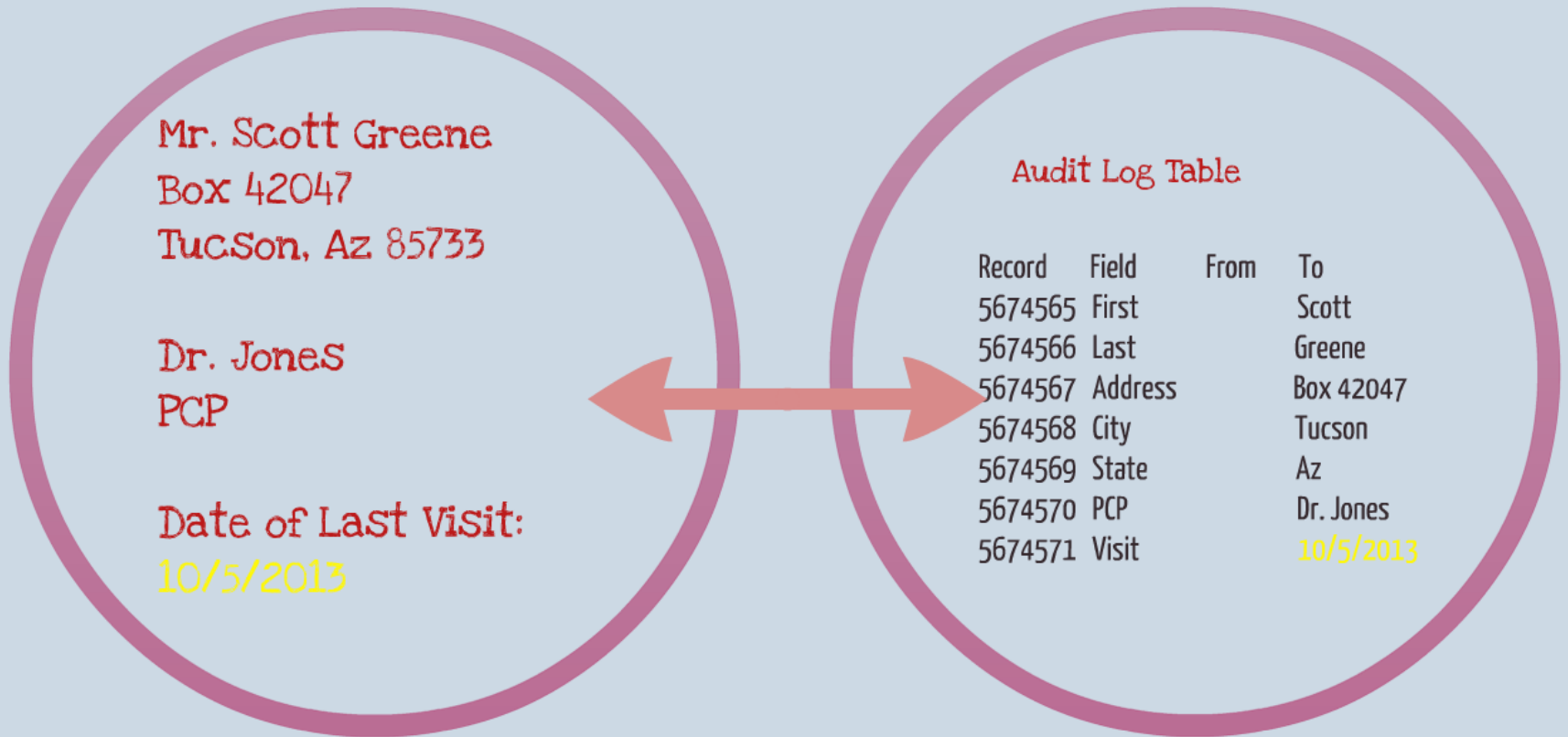
Smartphone Forensics Expert

Presented by Evidence Solutions, Inc. An Arizona Computer Forensics Company

Digital Forensics Expert



Record	Field	From	To	Empl ID	When
6585841	Address	Box 42047	Box 41150	568529	4/20/2013



**Edit both the patient  
record & the Audit Record**

Mr. Scott Greene  
Box 42047  
Tucson, Az 85733

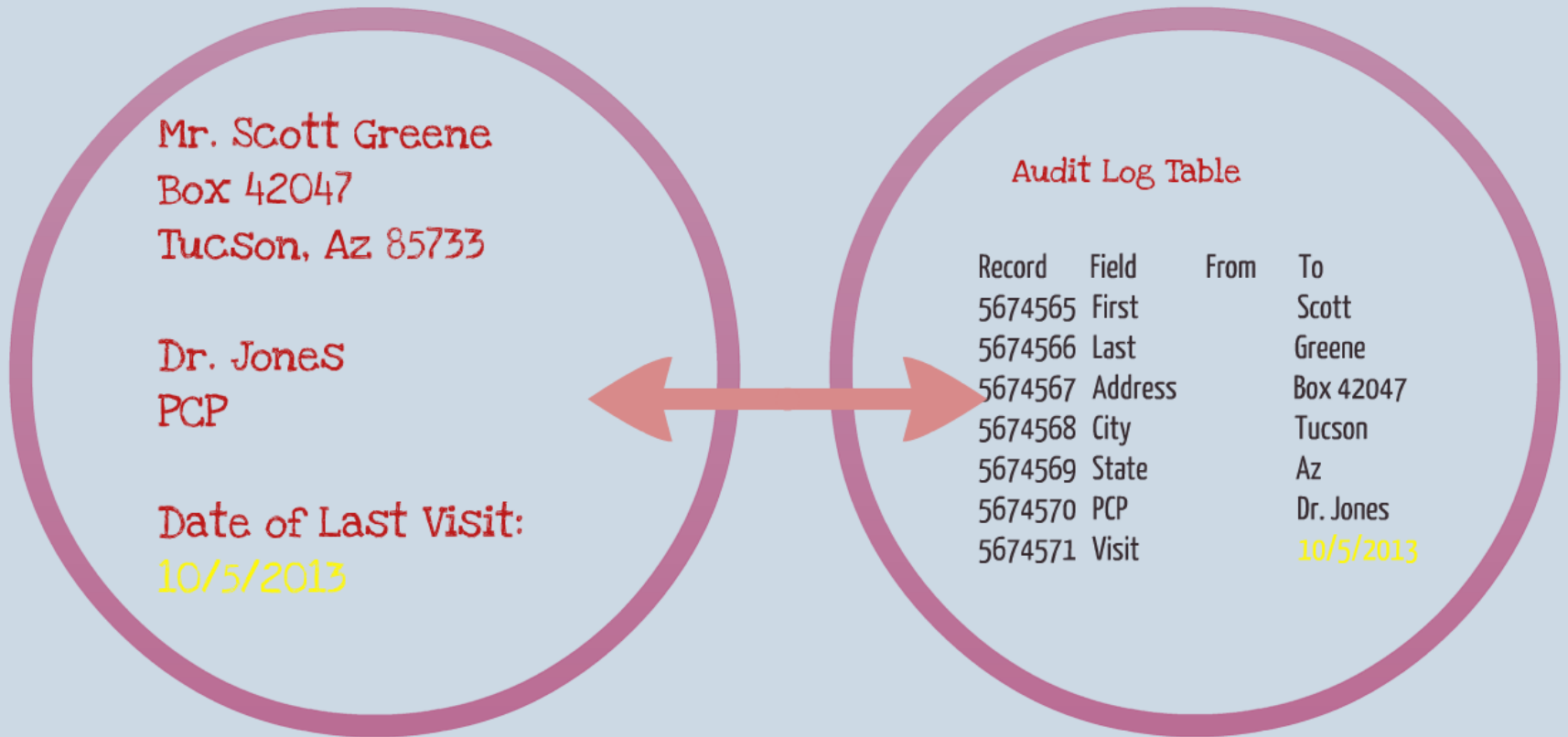
Dr. Jones  
PCP

Date of Last Visit:  
10/5/2013



## Audit Log Table

Record	Field	From	To
5674565	First		Scott
5674566	Last		Greene
5674567	Address		Box 42047
5674568	City		Tucson
5674569	State		Az
5674570	PCP		Dr. Jones
5674571	Visit		10/5/2013



**Edit both the patient  
record & the Audit Record**

From: "John C Plaintiff" <John@Lost-Tech.com>  
To: <Mark@manufacturer.com>  
Cc: "Robert Z Defendant" <Robert@LostTechnologies.com>  
Sent: Friday, March 03, 2006 3:35 PM  
Attach: Image Of Product.pdf  
Subject: Emailing: Image of Product.pdf

Mark,  
Please find attached a picture of our new product that we discussed.

Thanks,  
John  
President  
Lost Tech, Inc.

[www.LostTechnologies.com](http://www.LostTechnologies.com)



Sent: Friday, March 03, 2006 3:35 PM

Arizona Computer Forensics Expert

Maricopa County Bar Association

Metadata Expert Witness

Attach: Image Of Product.pdf

Subject: Emailing: Image of Product.pdf

Mark,  
Please find attached a picture of our new product that we discussed.

Thanks,  
John  
President  
Lost Tech, Inc.

[www.LostTechnologies.com](http://www.LostTechnologies.com)

ISO 9001:2000 \* ISO 14001 \* ISO18001 \* UL Listed

E-mail: [Robert@LostTechnologies.com](mailto:Robert@LostTechnologies.com)

The message is ready to be sent with the following file or link attachments: Image Of Product.pdf

From: "John C Plaintiff" <JohnP@Lost-Tech.com>  
To: "<Mark@manufacturer.com>" <Mark@manufacturer.com>  
Cc: "Robert Z Defendant" <Robert@Lost-Tech.com>  
Sent: Friday, [March 03, 2006](#) 3:35 PM  
Attach: Image Of Product.pdf  
Subject: Emailing: Image of Product.pdf

Mark,  
Please find attached a picture of our new product that we discussed.  
John

Lost Tech, Inc.  
[www.LostTechnologies.com](http://www.LostTechnologies.com)  
ISO 9001:2000 \* ISO 14001 \* ISO18001 \* UL Listed  
E-mail: [JohnP@LostTechnologies.com](mailto:JohnP@LostTechnologies.com)  
The message is ready to be sent with the following file or link attachments: Image Of Product.pdf

“MS Exchange Server version 6.5.7638.1”

Emailing: Image of Product.pdf

Return-path: <>

From: “John C Plaintiff” <JohnP@Lost-Tech.com>

To: “<Mark@manufacturer.com>” <Mark@manufacturer.com>

Cc: “Robert Z Defendant” <Robert@Lost-Tech.com>

From: "Robert Z Defendant" <Robert@LostTechnologies.com>  
To: robertzdefendant@yahoo.com;  
Sent: Thursday, [March 30, 2006](#) 9:29 AM  
Subject: FW: Check This out?  
funny mpeg

From: Robert Defendant

To: robertzdefendant@yahoo.com

Return-Path: <Robert@LostTechnologies.com>

Subject: FW: Check This out?

Produced By Microsoft Exchange V6.0.6249.0

Date: Thu, 30 Mar 2006 08:29:26 -0800

From: "Robert Defendant" <Robert@LostTechnologies.com>

To: <robertzdefendant@yahoo.com>

From: <Jose McCormick>

To: <“John C Plaintiff”>

Date: Monday, [October 02, 2006](#) 1:14 PM

Subject: new product status

CC: <Mrs Plaintiff>

John,

We've started on new product. It isn't perfect yet.

Jose

"MS Exchange Server version **14.02.5004.000**"  
Subject: new product status

The problem is:

Build:14.02

Rollup 3 for Exchange Server 2010

Service Pack 2 May 29, 2012

# Other Sources of Data

## AutoCAD Versioning

- AutoCAD has built in versioning
- Enterprise Document Management System (EDMS)
- Vault Collaboration - Autodesk Versioning on steroids



# This manufacturer used SolidWorks

- 3D CAD
- Product Data Management



# Driver Log Daily (All Days) Report

Organization: Odessa

Date: Thursday 04/05/12

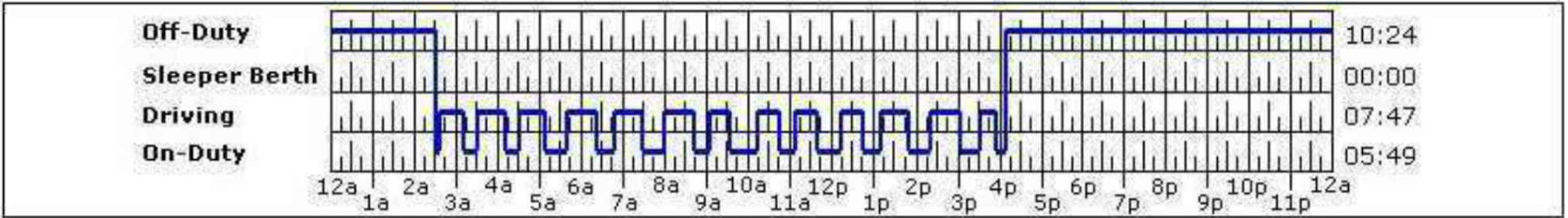
Driver:

I certify these entries are true and correct:

Driver Miles Today: 414.1  
 Co-Driver Miles Today: 0.0  
 Vehicle Miles Today: 414.1

Driver Name:   
 Co-Driver Name:

Carrier:	Fleet:
----------	--------



Remarks	Time	Status	Description	Inspect
-----	12:00A	OFF	(500) Odessa Yard Odessa, TX	
PRE-TRIP @ 2:32a 00:05	12:08A		Completed 34 hr off - weekly rule reset.	
VEHICLE: 303	02:32A	OUTY	(500) Odessa Yard Odessa, TX	
ROUTE: 0405120234	02:37A		State: TX	
POST-TRIP @ 4:03p 00:05	02:37A		Driver Join(500) Odessa Yard Odessa, TX	
	02:37A	OUTY	(500) Odessa Yard Odessa, TX	
	02:38A	OUTY	(500) Odessa Yard Odessa, TX	

04/05/12 0618 SMS - Inbox

04/05/12 0619 SMS - Sent

04/05/12 0620 SMS - Inbox

04/05/12 0621 SMS - Sent

04/05/12 0624 SMS - Inbox

04/05/12 0625 In Service

04/05/12 0629 SMS - Sent

04/05/12 0650 Driving

04/05/12 0710 SMS - Sent

04/05/12 0623 in service

04/05/12 0629 SMS - Sent

04/05/12 0650 Driving

04/05/12 0710 SMS - Sent

04/05/12 0711 SMS - Inbox

04/05/12 0712 SMS - Sent

04/05/12 0713 SMS - Sent

04/05/12 0714 SMS - Inbox

04/05/12 0714 SMS - Inbox

04/05/12 0715 SMS - Sent

04/05/12 0715 SMS - Sent



04/05/12	0714	SMS - Inbox
04/05/12	0715	SMS - Sent
04/05/12	0716	SMS - Inbox
04/05/12	0716	SMS - Sent
04/05/12	0718	SMS - Sent
04/05/12	0719	SMS - Inbox
04/05/12	0720	SMS - Sent
04/05/12	0721	SMS - Sent
04/05/12	0721	SMS - Inbox
04/05/12	0722	SMS - Inbox

04/05/12	0721	SMS - Sent
04/05/12	0721	SMS - Inbox
04/05/12	0722	SMS - Inbox
04/05/12	0723	SMS - Sent
04/05/12	0723	SMS - Sent
04/05/12	0724	SMS - Inbox
04/05/12	0724	SMS - Inbox
04/05/12	0725	SMS - Sent

# What to do / How to do it.

Meta Data is Everywhere

- it can tell a much different story than the data

How does a lawyer know when to call for help?

- upfront a consultant can steer an attorney in the right direction
- data that looks suspicious

**'The Nuts & Bolts of Requesting, Searching For and Using Electronically Stored Information'**

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Over 30 Years Experience  
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866-795-7166

Scott@EvidenceSolutions.com

**How did you get the address?**

Source	Address	IP	Port	Protocol	Time	Bytes	Direction
192.168.1.100	192.168.1.1	80	TCP	10/10/2011 10:00:00	100	100	Out
192.168.1.1	192.168.1.100	80	TCP	10/10/2011 10:00:01	100	100	In

**How to extend electronic data**

- Identify all locations on the web for logging, storage, & backup
- Identify all locations on the web for logging, storage, & backup
- Identify all locations on the web for logging, storage, & backup
- Identify all locations on the web for logging, storage, & backup

**How can I get the data?**

- How can I get the data?
- How can I get the data?
- How can I get the data?

**Check the logs!**

- Check the logs!
- Check the logs!
- Check the logs!

**Check the logs!**

- Check the logs!
- Check the logs!
- Check the logs!

**Check the logs!**

- Check the logs!
- Check the logs!
- Check the logs!

Source	Destination	Protocol	Time	Bytes	Direction
192.168.1.100	192.168.1.1	TCP	10/10/2011 10:00:00	100	Out
192.168.1.1	192.168.1.100	TCP	10/10/2011 10:00:01	100	In

Source	Destination	Protocol	Time	Bytes	Direction
192.168.1.100	192.168.1.1	TCP	10/10/2011 10:00:00	100	Out
192.168.1.1	192.168.1.100	TCP	10/10/2011 10:00:01	100	In

Source	Destination	Protocol	Time	Bytes	Direction
192.168.1.100	192.168.1.1	TCP	10/10/2011 10:00:00	100	Out
192.168.1.1	192.168.1.100	TCP	10/10/2011 10:00:01	100	In

Source	Destination	Protocol	Time	Bytes	Direction
192.168.1.100	192.168.1.1	TCP	10/10/2011 10:00:00	100	Out
192.168.1.1	192.168.1.100	TCP	10/10/2011 10:00:01	100	In

**How to get the data?**

- How to get the data?
- How to get the data?
- How to get the data?

**How to get the data?**

- How to get the data?
- How to get the data?
- How to get the data?

**How to get the data?**

- How to get the data?
- How to get the data?
- How to get the data?



**Other sources of data**

- Other sources of data
- Other sources of data
- Other sources of data

**Other sources of data**

- Other sources of data
- Other sources of data
- Other sources of data



**Other sources of data**

- Other sources of data
- Other sources of data
- Other sources of data

**Other sources of data**

- Other sources of data
- Other sources of data
- Other sources of data

Source	Destination	Protocol	Time	Bytes	Direction
192.168.1.100	192.168.1.1	TCP	10/10/2011 10:00:00	100	Out
192.168.1.1	192.168.1.100	TCP	10/10/2011 10:00:01	100	In

**Other sources of data**

- Other sources of data
- Other sources of data
- Other sources of data

**What to do / How to do it.**

**What to do / How to do it.**

- What to do / How to do it.
- What to do / How to do it.
- What to do / How to do it.

**Other sources of data**

- Other sources of data
- Other sources of data
- Other sources of data



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Scott@EvidenceSolutions.com

**Headline:** November 15: Monthly Meeting

**Excerpt:** Computer Forensics in Fraud Investigations

**Description:**

Join us at the Industrial Commission auditorium for our regular monthly training meeting on Tuesday, November 15, 2016.

**Topic:** Computer Forensics in Fraud Investigations

**Speaker:** Scott Greene, Senior Forensics Examiner @ Evidence Solutions, Inc.

**Agenda:** Sign-in begins at 11:30 am; presentation from 12:00 - 1:00 pm

**Location:** Industrial Commission of Arizona, 800 W. Washington, 1st Floor Auditorium

**Parking:** Free, on the top level of the garage just west of the building

**Cost:** Free for current chapter members; \$20 all others

**Registration information:** Pre-registration is not required for this event. However, we encourage guests to pre-register online, as this allows you to pay your admission fee with a credit card. If you do not pre-register, cash and checks only are accepted at the door. Chapter members may also pre-register online, to save time at the sign-in table. Register online at [cfe-arizona.org](http://cfe-arizona.org).

**Refund Policy:** Email [training@cfe-arizona.org](mailto:training@cfe-arizona.org) to cancel. To be eligible for a refund, cancellations must be received by the 3rd business day prior to the meeting (for example, by Thursday at 5 pm before a Tuesday meeting).

**Complaint Resolution:** Please contact the Training Director at [training@cfe-arizona.org](mailto:training@cfe-arizona.org).

**Program Description**

Scott's presentation will discuss computer forensics in fraud investigations. This fast moving presentation will include real world experience, case examples and interactive discussion about

computer forensics and its benefit to fraud investigations.

## **Learning Objectives**

After completing this course, you will be able to:

Identify when Computer Forensics should be employed in a fraud investigation.

Understand the benefit of Computer Forensics in fraud investigations.

Understand the proper handling of digital evidence to prevent spoliation and improper chain of custody accusations.

## **Program Information**

Delivery Method: Group Live

Recommended Field of Study: Specialized Knowledge & Applications

Recommended CPE Credits: 1 (CPE Certificates will be emailed within 10 business days to those who attend the entire program and sign in on the attendance sheet.)

Level: Basic

Prerequisites: None

Advance Preparation: None

## **Presenter Information**

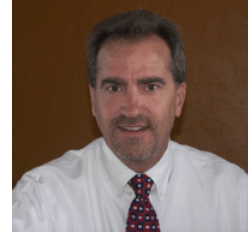
See Attached.

**NASBA Statement:** Association of Certified Fraud Examiners, Arizona Chapter is registered with the National Association of State Boards of Accountancy (NASBA) as a sponsor of continuing professional education on the National Registry of CPE Sponsors. State boards of accountancy have the final authority on the acceptance of individual courses for CPE credit. Complaints regarding registered sponsors may be submitted to the National Registry of CPE

Sponsors through its website: [www.learningmarket.org](http://www.learningmarket.org)



Evidence Solutions, Inc.



## *Biography*

### Scott Greene

Scott is the CEO of Evidence Solutions, Inc. Scott Greene has been doing Data Recovery, Computer, Technology and Digital Forensics, and EDiscovery work for over 30 years.

Directly out of high school, Scott went to work for IBM as a programmer.

In 2008 he created Evidence Solutions, Inc., a full service Computer, Technology & Digital Forensics firm, from the Technology Forensics department of Great Scott Enterprises.

Scott has developed and presented strategic planning seminars, taught numerous classes in database design & optimization, cyber security and technology forensics. Scott's extensive knowledge draws clients to him from all over the United States as well as Internationally for consulting and expert witness services in the field of Technology, Computer & Digital Forensics. His extensive and diverse experience allows him to be an expert in many facets of computer & digital technology.

Scott and Evidence Solutions have been involved in Civil & Criminal Cases, for Plaintiff, Defense and Special Master in Justice, Superior & District Courts as well as Internationally.

He is a sought after speaker and educator and travels throughout the country presenting to local, regional, national and International organizations.

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Computer, Technology, and Digital Forensics for Over 30 Years.

[www.EvidenceSolutions.com](http://www.EvidenceSolutions.com)

[Scott@EvidenceSolutions.com](mailto:Scott@EvidenceSolutions.com)

Box 42047; Tucson, Az 85733

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