

U.S. DEPARTMENT OF HOMELAND SECURITY  
FEDERAL LAW ENFORCEMENT TRAINING CENTER  
OFFICE OF TRAINING OPERATIONS  
TECHNICAL OPERATIONS DIVISION



# Homeland Security

## LESSON PLAN

INTERNET RESOURCES FOR MOBILE DEVICE INVESTIGATIONS

3258

SEP/10

~~WARNING~~

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LP updated as follows:

Division Title changed from CFI to TOD, and FOUO/LES markings added.

There were no changes to the TPO or EPOs

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Template Revised

**REVIEWED BY: (SEP/10)**

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## SYLLABUS

**COURSE TITLE: INTERNET RESOURCES FOR MOBILE DEVICE INVESTIGATIONS**

**COURSE NUMBER: 3258**

**COURSE DATE: SEP/10**

**LENGTH OF PRESENTATION:**

LECTURE	LAB	P.E.	TOTAL	PROGRAM	OPTION
.5	.5		1	MDIP	

### **DESCRIPTION:**

To a great extent, cell phone technology has evolved with the World Wide Web. There are outstanding Internet sites available for the mobile device investigator. This course identifies and navigates the most beneficial sites.

### **TERMINAL PERFORMANCE OBJECTIVE (TPO):**

Given a potential criminal investigation involving cell phones, identify several Internet sites that can provide useful information that can lead to a successful conclusion to the investigation.

### **ENABLING PERFORMANCE OBJECTIVES (EPO):**

EPO #1: Identify several web sites relating to cellular phone investigations that may be of benefit in criminal investigations.

EPO #2: Identify several web sites relating to cellular phone technology that may be of benefit in criminal investigations.

EPO #3: Identify several web sites relating to cellular phone forensics that may be of benefit in criminal investigations.

### **STUDENT SPECIAL REQUIREMENTS:**

NONE

### **METHOD OF EVALUATION:**

COMPLETION OF COURSE

## **INSTRUCTOR GUIDE**

### **METHODOLOGIES:**

1. Demonstration
2. Discussion

### **TRAINING AIDS/EQUIPMENT:**

1. Instructor:  
Computer with Internet connectivity, PowerPoint and Projector
2. Student:  
Computer with Internet connectivity

### **INSTRUCTOR SPECIAL REQUIREMENTS:**

None

## OUTLINE OF INSTRUCTION

### I. INTRODUCTION

#### A. RAPPORT AND OPENING STATEMENT

The World Wide Web, and other Internet sites, provide a broad set of tools for the mobile device investigator. This course explores the most useful.

#### B. LESSON PLAN OVERVIEW

1. Terminal performance objective (TPO)  
Given a potential criminal investigation involving cell phones, identify several Internet sites that can provide useful information that can lead to a successful conclusion to the investigation.
2. ENABLING PERFORMANCE OBJECTIVES (EPO)  
EPO #1: Identify several web sites relating to cellular phone investigations that may be of benefit in criminal investigations.  
EPO #2: Identify several web sites relating to cellular phone technology that may be of benefit in criminal investigations.  
EPO #3: Identify several web sites relating to cellular phone forensics that may be of benefit in criminal investigations.

### II. PRESENTATION

#### A. EPO#1: IDENTIFY SEVERAL WEB SITES RELATING TO CELLULAR PHONE INVESTIGATIONS THAT MAY BE OF BENEFIT IN CRIMINAL INVESTIGATIONS.

1. SEARCH.org  
(<http://www.search.org/files/pdf/CellphoneInvestToolkit-0806.pdf>)  
This is a helpful e-book on developing an effective cell phone forensics kit.
2. Telestrategies. (<http://www.telestrategies.com/LEATraining/>)  
One of the best purely investigative sites relating to cell phones. Great resource for investigative techniques and applied arcane technologies.
3. State Department – Investigative Resources.  
(<http://www.state.gov/m/ds/investigat/75395.htm>)  
This is a site of useful links to a variety of investigative resources.

4. E-Evidence. (<http://www.e-evidence.info/index.html>)  
Dozens of useful links in a variety of forensics disciplines.

**B. EPO#2: IDENTIFY SEVERAL WEB SITES RELATING TO CELLULAR PHONE TECHNOLOGY THAT MAY BE OF BENEFIT IN CRIMINAL INVESTIGATIONS.**

1. Primeris Fonebook ([www.primeris.com](http://www.primeris.com)); select 'Fonebook'.
  - a. Fonebook allows the entry of any cell number. It will return the geographic area of subscription and Cell Service provider
  - b. It does not maintain the currently assigned MDN (alias).
2. Neustar ([www.neustar.com](http://www.neustar.com))  
Neustar is a full service telephony service, available for free to law enforcement (after registration). Unlike Fonebook it does track currently assigned MDN's.
3. Cell Towers Maps. (<http://www.cellreception.com/towers/>)  
This site maps (with a Google Maps overlay) most cell phone towers providing detailed information about each: coordinates, owner, type, etc. The Google interface provides additional services. However, this site does not list the Cell Service Providers who rent or own the site.
4. Cell Phone History.  
([http://en.wikipedia.org/wiki/History\\_of\\_mobile\\_phones](http://en.wikipedia.org/wiki/History_of_mobile_phones)).  
This site discusses in depth the history and evolution of cell technology and puts much of the current technology in proper perspective.
5. How Cell Phones Work. (<http://electronics.howstuffworks.com/cell-phone.htm>)  
This is a very detailed tutorial on the technology of cell phones.
6. FCC. ([www.fcc.gov](http://www.fcc.gov))  
Navigate or search through the FCC site for all cellular specifications, technology definitions, area maps, and all other regulatory issues relating to the technology.
7. Penelope Stetz web site. (<http://wirelesswhiz.com/urls.html>)  
Ms. Stetz is a noted author and lecturer on cell phone technology. Although this is a personal web site it has

dozens of references, FAQ's, and links relating to cellular technology.

8. Wireless Advisor. (<http://www.wirelessadvisor.com/>)  
A clearinghouse of forums, reviews, and information about all issues cellular.
9. Telephony Online.  
([http://telephonyonline.com/wireless/mag/wireless\\_chasing\\_wnp/](http://telephonyonline.com/wireless/mag/wireless_chasing_wnp/))  
A clearinghouse for all things related to telephony.

**C. EPO #3: IDENTIFY SEVERAL WEB SITES RELATING TO CELLULAR PHONE FORENSICS THAT MAY BE OF BENEFIT IN CRIMINAL INVESTIGATIONS.**

1. Mobile Forensics Central.  
(<http://www.mobileforensicscentral.com/mfc/>)  
A good reference site for cell phone investigators, there are software reviews, discussion groups, technical discussions of cell phone models, and helpful assistance with forensics issues.
2. NIST Mobile Security and Forensics.  
([http://csrc.nist.gov/groups/SNS/mobile\\_security/index.html](http://csrc.nist.gov/groups/SNS/mobile_security/index.html))  
A good overview site on mobile devices from the National Institute for Standards and Technology.
3. BKForensics. (<http://www.bkforensics.com/CPA.html>)  
Home page for the Cell Phone Analyzer (CPA) mobile forensics product.
4. Cellebrite. (<http://www.cellebrite.com/>)  
Home page for the Cellebrite mobile forensics products.
5. Susteen DataPilot. (<http://www.susteen.com/>)  
Home page for the DataPilot forensics software.
6. Paraben. ([http://www.paraben-forensics.com/handheld\\_forensics.html](http://www.paraben-forensics.com/handheld_forensics.html))  
Home page for Paraben's mobile forensics products.



### **III. SUMMARY**

#### **A. REVIEW OF PERFORMANCE OBJECTIVES**

1. EPO #1: Identify several web sites relating to cellular phone investigations that may be of benefit in criminal investigations.
2. EPO #2: Identify several web sites relating to cellular phone technology that may be of benefit in criminal investigations.
3. EPO #3: Identify several web sites relating to cellular phone forensics that may be of benefit in criminal investigations.

#### **B. REVIEW OF TEACHING POINTS**

1. The Internet is an invaluable tool for cell phone investigators. The sites listed here are some of the best but are by no means an exhaustive reference.
2. The sites demonstrated and reviewed in class related to:
  - a. Mobile technology and telephony
  - b. Mobile device investigations
  - c. Mobile device forensics.

### **IV. APPLICATION**

#### **A. LABORATORY**

1. NONE.

#### **B. PRACTICAL EXERCISE**

1. NONE.

## REFERENCES

Stetz, Penelope; The Cell Phone Handbook; 2<sup>nd</sup> Ed.; FindTech, Ltd.; Cleveland, OH; 2002.

Bedell, Paul; Wireless Crash Course; McGraw Hill; New York; 2001.

Layton, Julia, Marshall Brain and Jeff Tyson. "How Cell Phones Work." 14 November 2000. HowStuffWorks.com. <<http://electronics.howstuffworks.com/cell-phone.htm>> 03 April 2008.

Unaccredited article. "Wireless 101"; 19 May, 2008. Cellular Technology Industry Association. [http://www.ctia.org/consumer\\_info/service/index.cfm/AID/10319](http://www.ctia.org/consumer_info/service/index.cfm/AID/10319).

Unaccredited article. "History of Mobile Phones." 14 April 2005. Wikipedia. <[http://en.wikipedia.org/wiki/History\\_of\\_mobile\\_phones](http://en.wikipedia.org/wiki/History_of_mobile_phones)> 05 April 2008.

*Note: all sites reviewed in this course constitute lesson plan references.*

## BIBLIOGRAPHY

None

## ATTACHMENTS

None