

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



Homeland Security

LESSON PLAN

CALL DETAIL RECORDS

3263

SEP/10

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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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LAW ENFORCEMENT SENSITIVE

SYLLABUS

COURSE TITLE: CALL DETAIL RECORDS

COURSE NUMBER: 3263

COURSE DATE: SEP/10

LENGTH OF PRESENTATION:

LECTURE	LAB	P.E.	TOTAL	PROGRAM	OPTION
2			2	MDIP	

DESCRIPTION:

Call Detail Reports are those records available from the Cellular Service Provider that pertain to the cellular usage of the subscriber during a specific period of time (typically, monthly). In this course we will examine how the records are obtained and the evidence/information that can be obtained from them.

TERMINAL PERFORMANCE OBJECTIVE (TPO):

Given a potential investigative scenario involving cellular telephones and a set of records provided by the Cellular Service Provider, the learner will analyze the records in order to determine specific actions and locations of the investigation subject order to successfully complete the assigned investigation.

ENABLING PERFORMANCE OBJECTIVES (EPO):

EPO #1: Define "Call detail Reports" and identify how they are acquired.

EPO #2: Identify the type of information available to the investigator from Call Detail Reports.

STUDENT SPECIAL REQUIREMENTS:

None

METHOD OF EVALUATION:

Completion of course.

INSTRUCTOR GUIDE

METHODOLOGIES:

1. Lecture with questions
2. Discussion

TRAINING AIDS/EQUIPMENT:

1. Instructor:
 - a. Computer with PowerPoint and Projector
 - b. Copies of call detail reports
 - c. Writing surface
2. Student:
 - a. Call detail reports (provided by instructor)

INSTRUCTOR SPECIAL REQUIREMENTS:

Comprehensive understanding of cellular technology and the ability to interpret the Call detail Report.

OUTLINE OF INSTRUCTION

I. INTRODUCTION

A. RAPPORT AND OPENING STATEMENT

1. Cellular technology is relatively new, having inundating contemporary American (and world) culture within the past decade. However, with the flood of cell phones, law enforcement is confronted with new tools of criminal activity and, as well, new investigative tools.
2. Law enforcement largely ignorant of the tremendous investigative assets that accompanies cell phone technology. MDIP addresses that lack by presenting to the journey level law enforcement officer an understanding of this new technology and its investigative benefits.
3. In order to fully understand and apply the investigative tools provided by cellular technology, the officer needs to have a basic understanding of the technology. While this course does not provide an exhaustive discussion of the overwhelming technology involved in cellular communications, it does provide enough material information so that law enforcement officers can understand and apply the technology to their benefit.

B. LESSON PLAN OVERVIEW

1. Terminal performance objective (TPO)
Given a potential investigative scenario involving cellular telephones and a set of records provided by the Cellular Service Provider, the learner will analyze the records in order to determine specific actions and locations of the investigation subject order to successfully complete the assigned investigation.
2. ENABLING PERFORMANCE OBJECTIVES (EPO)
 - a. EPO #1: Define "Call detail Reports" and identify how they are acquired.
 - b. EPO #2: Identify the type of information available to the investigator from Call Detail Reports.

II. PRESENTATION

A. EPO #1: REPLACE THIS TEXT WITH EPO #1

A. EPO#1: DEFINE "CALL DETAIL REPORTS" AND IDENTIFY HOW THEY ARE ACQUIRED.

4. Call Detail Reports are those records maintained by the Cellular

Service Provider (CSP) used to report cellular phone usage, anomalies, and charges incurred by the subscriber.

5. The CSP also maintains some records related to subscriber use that is not normally included in the subscribers bill. That information is also part of the Call Detail Report and available law enforcement.
6. Consistent with the Federal Communications Assistance for Law Enforcement Act (CALEA), they are available to law enforcement officers.
7. Typically, Call Detail Reports are obtained via a subpoena.
8. Since Call Detail Reports are self-serving to the CSP, the format is unique to each CSP.
9. Call detail Reports contain very arcane and technical items that may be difficult for the officer to interpret. It is sometimes desirable to contact the Law enforcement Liaison of the CSP to seek assistance in interpreting the data.
10. Although subpoenaed records may be delivered in paper, the officer may consider having the records delivered digitally so that the data can be integrated into an electronic spreadsheet, database, or other viable tool. Subpoenas can be prepared in such a way as to direct the delivery mode.

B. EPO#2: IDENTIFY THE TYPE OF INFORMATION AVAILABLE TO THE INVESTIGATOR FROM CALL DETAIL REPORTS.

Instructor Note: Attachments 2 and 3 are examples of Call detail Reports provided by AT&T Wireless and Alltel, respectively. The instructor should project each of these examples and discuss the significance of each field.

1. Call to/Call from data. The CDR reports for a range of dates all calls to and from the subject cell phone, including date and time of each call, duration, from what physical location the call originated and from what cell it ended.
 - a. With this data the investigator can physically locate the cell phone for specific dates and times as well as calculate movements if the call was connected during mobile activity.
 - b. The Cell Service Provider may have to be contacted to assist in translating the location codes. Note that the AT&T CDR provides tower/cell GPS data for each record. That data may also be available from other service providers if requested.
2. Status of connection. The CDR will report if the call was:
 - a. Successfully completed or interrupted;

- b. Forwarded to another number;
 - c. Was to a land line, voice mail, or other cell phone.
3. Network services provided. Although this data may be arcane to the investigator, it may be of significance when interpreted by the service provider. For instance, a particular call through a Washington, DC network, followed two hours later by a call through a Jacksonville, FL network would suggest intermediate air travel.
 4. Other significant data may also be implied from careful examination of the CDR.

III. SUMMARY

A. REVIEW OF PERFORMANCE OBJECTIVES

1. EPO #1: Define "Call detail Reports" and identify how they are acquired.
2. EPO #2: Identify the type of information available to the investigator from Call Detail Reports.

B. REVIEW OF TEACHING POINTS

1. The acquisition of Call Detail Reports (CDR's) during an investigation can frequently provide valuable insight for the investigator as to the subject's physical location, movements, and contacts.
2. CDR's are typically available via subpoena.
3. Although CDR's will always duplicate the billing records of the subject cell phone, additional data from the service provider is usually available.

IV. APPLICATION

A. LABORATORY

None

B. PRACTICAL EXERCISE

NONE.

REFERENCES

Stetz, Penelope; The Cell Phone Handbook; 2nd 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.

BIBLIOGRAPHY

None

ATTACHMENTS

1. Call Detail Report Example (AT&T)
2. Call Detail Report Example (Alltel)

Pages 12 through 15 redacted for the following reasons:

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