Introduction

The Los Angeles Fire Department (LAFD)'s Computer Aided Dispatch (CAD) system is a transactional, event-driven system that records dates and time stamps based on events triggered by two distinct human interactions: interaction with CAD at the dispatch center via CAD workstation, and interaction with CAD via the Mobile Data Computer (MDC) installed in the responding LAFD unit, communicating with CAD through the LAFD's Radio Network Controller (RNC).

Purpose and Intended Audience

The purpose of this guide is to provide the basic information needed to understand the elements of LAFD's open data. This document is technical in nature and is intended for an audience with a background in IT.

Open Data Records Types

Palantir Gotham, the system that prepares CAD operational data for OpenData consumption, combines parent/child records (in relational terms) into a single dataset. _Subsequently, it is very important to identify the type of records before running any analysis on the data._

Each record in the dataset is either:

1- **An Incident Record:** or the "Parent" record that contains Call-for-Service information. Records in this category have their EmergencyDispatchCode, FirstInDistrict, and CreationTime fields populated.

2- **A Response Record:** or a "Child" record that contains each of the responding unit information. Records in this category have their UnitType, DispatchSequence and DispatchStatus fields populated.

Incident and Response records that relate to a single call for service share a common RandomizedIncidentNumber key.

Open Data Table Fields

Randomized Incident Number – (All Records - Number): this is the incident number for the call that has had to be re-identified for the purposes of medical patient protection. LAFD is considered a medical service provider[1]. This number is generated with the year and quarter indicator with a six digits randomized number attached, i.e. – 201301345785, this number means it is in the year 2013 in the first quarter.

First in District – (Incident Records - Number): the location where the incident occurred in terms of a Fire Station district. The area where a particular fire station responds as well as where the incident occurred.

Emergency Dispatch Code – (Incident Records - Plain Text): indicates whether an incident was categorized as emergency or non-emergency. This dataset contains information related to emergency incidents only.

Dispatch Sequence – (Response Records - Number): the number assigned to each resource in the order in which it is dispatched to the incident. There may be numbers that are skipped in the sequence. This is due to the vehicle being assigned to the incident but then removed before it is dispatched. The dynamic situation of an emergency call allows for additions or removal of resources as more information is gathered. There may also be duplicate numbers in the sequence. This is due to the merging of incidents, once it is discovered that there is more than one call received for the same incident.

Dispatch Status – (Response Records – Plain Text): the status of the responding unit at the time of dispatch. For example, status "QTR" means a unit responded from quarters, "RAD" means a unit responded from a radio call in and was not in quarters at the time, "AVI" means the unit is available, typically when released from an incident, and "ONS" means the unit is on-scene.

Unit Type – (Response Records – Plain Text): the type of responding unit. For example, "RA" stands for Rescue Ambulance, "E" stands for Engine and "T" stand for Truck.

PPE Level[2] – (Response Records – Plain Text: EMS, or Non-EMS) EMS category includes incident types that require minimum PPE and a Turnout Time of 60 seconds. The majority of these incidents are medical in nature and do not require fire suppression tools and equipment to mediate. The NON-EMS category includes incidents that require full PPE and a Turnout Time of 80 seconds. The majority of these incidents require fire suppression tools and equipment to mediate and may result in patients that require medical evaluation and treatment.

Incident Creation Time[3] – (Incident Records – Time Stamp): The time when the call-taker is presented with the call and takes charge of it, then creates an incident record in CAD. During this process, the call-taker verifies the address information and interviews the caller to find out what the nature of the call.

Time of Dispatch[3] – (All Records – Time Stamp): CAD automatically captures the time a fire station is notified and provided dispatch instructions via the LAFD's Fire Station Alerting System. Notification is simultaneously made via FAX, DATA, and AUDIO to the responding unit(s).

En Route Time[3, 4] – (Response Records – Time Stamp) CAD captures the time when LAFD resources leave quarters by storing the time in which the corresponding key is pressed at the resource's Mobile Data Computer (MDC).

On-Scene Time[3, 4] – (Response Records – Time Stamp) CAD captures the time when LAFD resources arrive at the scene of the incident when the corresponding key is pressed at the resource's MDC.

1 - LAFD must therefore comply with the HIPAA law (Health Insurance Portability and Accountability Act of 1996). We can only release data which contains no 'individually identifiable health information', (IIHI), and therefore no 'protected health information', (PHI).

2 – Personal Protective Equipment

3 – All times are listed as Greenwich Meant Time (GMT). Los Angeles is in the Pacific Time Zone. Pacific Standard Time (PST) is 8 hours behind GMT. Pacific Daylight Time (PDT) is 7 hours behind GMT, when Daylight Savings Time is observed.

4 - It must be noted that the recording of En Route Time and On-Scene Time is an event-driven process that requires first-responder interaction. The precision of those time stamps depends on the timeliness of when the user manually activates the respective function key on the MDC (Mobile Data Computer). Missing On-Scene Times can be due to the button not being pushed or the unit was En Route but was cancelled before arriving. We have found that the majority of these are from cancellation.

<u>Please be aware of the following:</u>

Occasionally, multiple times stamps can occur due to multiple button presses. The time stamp recorded with the first button push should be used for the analysis.

Transitional calls, changed from emergency to non-emergency, or vice-versa, are not easily identified and are not currently tracked.