

Crash Magic Missouri Training Crash Records Analysis

SAMPLE

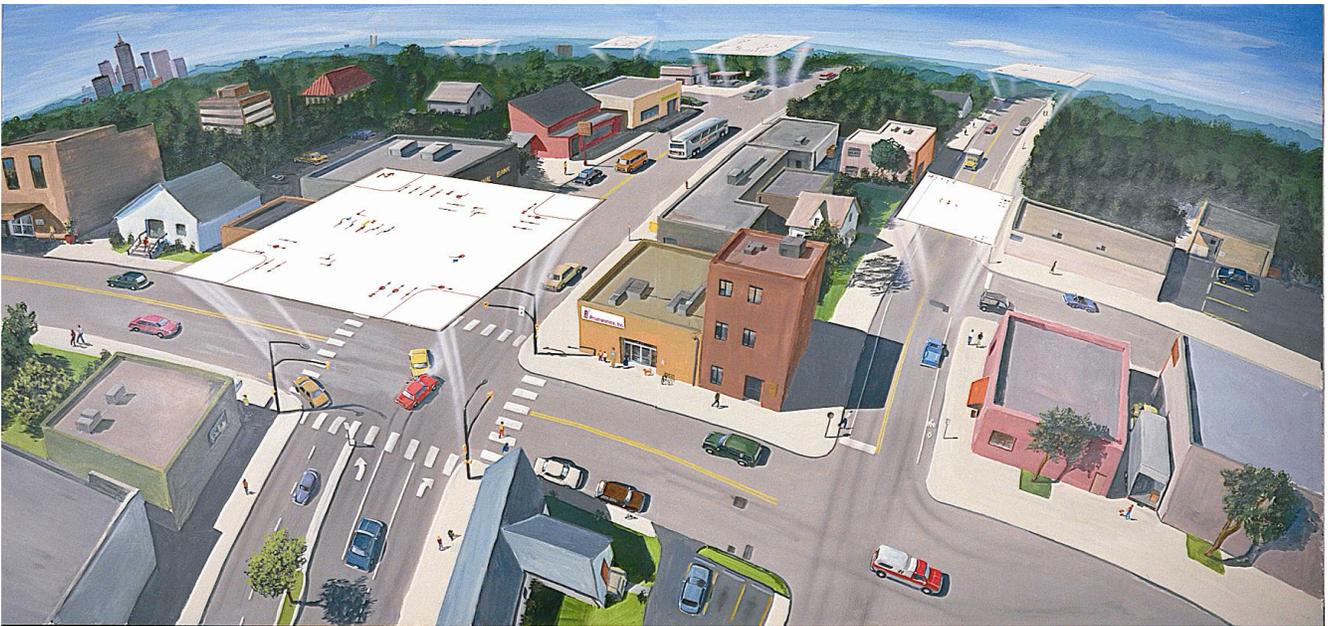


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1 Section 1

1.1 Overview and Agenda

Welcome to this Crash Magic one-day training!

This is a special one-day training designed specifically for the Missouri DOT. This training will focus on introducing new users to location-specific reports such as collision diagrams, listings, charts and pin maps. Excluded will be system-wide analysis such as high crash locations lists as well as location queries. Instead, the DOT will utilize their existing crash data analysis tools for location selection, passing along the relevant crash records to Crash Magic for diagramming and other reporting.

The final plan for this system is for it to be connected with your existing crash data analysis tool. Once completed, data selected there will be automatically sent to Crash Magic. In the meantime, we've configured Crash Magic to provide two methods for selecting data: "Lat Long", which accepts a rectangular selection area; and "HP Acc Image Num List" which accepts a list of crash id numbers. Example studies have been prepared to facilitate use during the training.

Instructor: Pete d'Oronzio

8:30 - 10:00

1. Login Form
 - Login and password management
 - Administrator role
2. Main screen and navigation
 - The main screen
 - Projects, studies and reports
3. Studies / selecting data
 - Intersection
 - By date
 - Unrestricted
4. Collision diagrams
 - Creation
 - Schematics

10:15 - noon

1. Tabular listing reports
 - Picking fields
 - Setting titles
 - Lookup versus "raw" data

2. Filters

- Single field & value
- Single field with .OR.
- Multiple field

1:15pm - 2:30

1. Charts

- Existing
- New

2. Collision diagrams

- Click-on
- Moving graphics

3. Exporting data

- CSV
- Excel

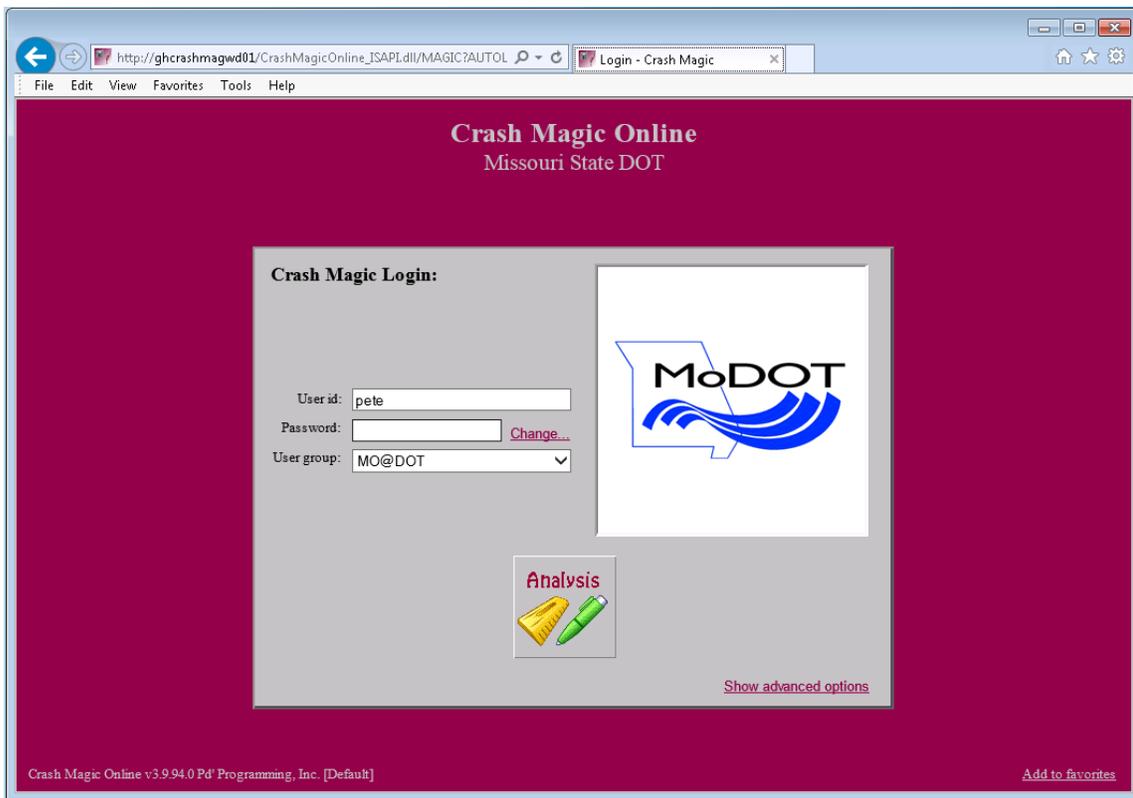
2:45pm - 4:00

1. Wrap up

- Q & A
- Contacting Pd' Programming for support
- Online mini-trainings

1.2 Login Form

Each user has their own login to the system.

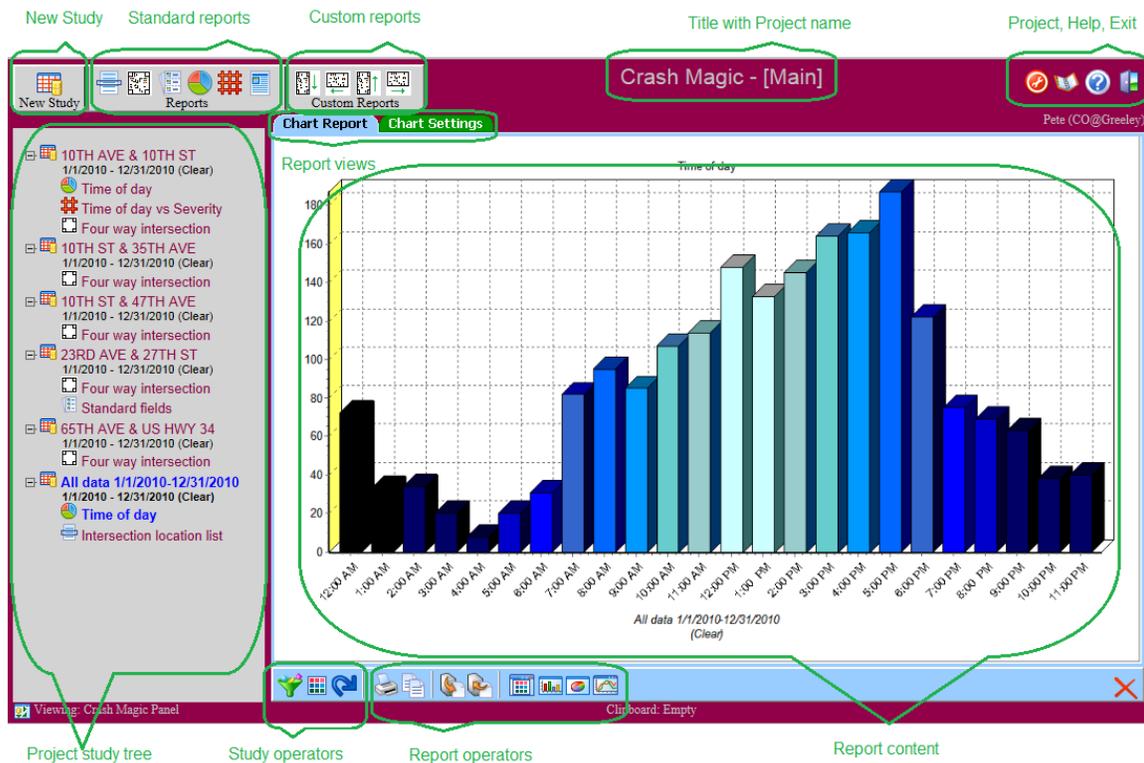


One or more users will be designated "Group Administrators" and can create and manage user accounts.

For today's training, the logins are Training02, Training03 ... Training15. New accounts are generally created with a password of "abc123!".

1.3 Main screen and navigation

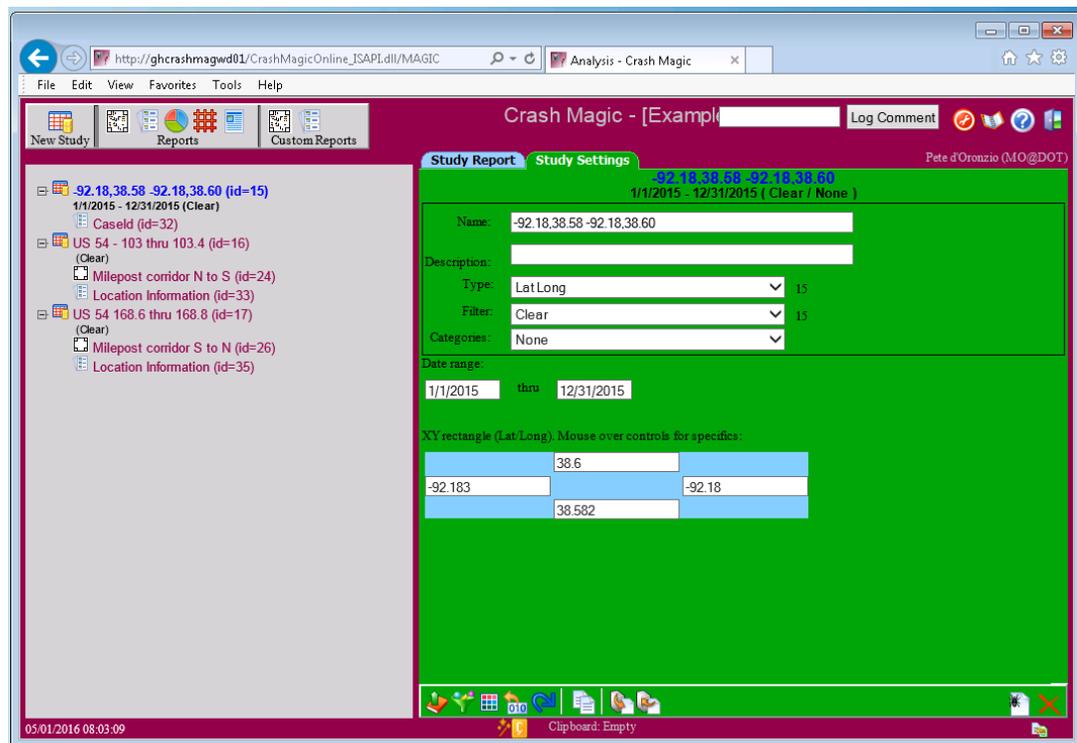
This is how a screen looks when viewing a report.



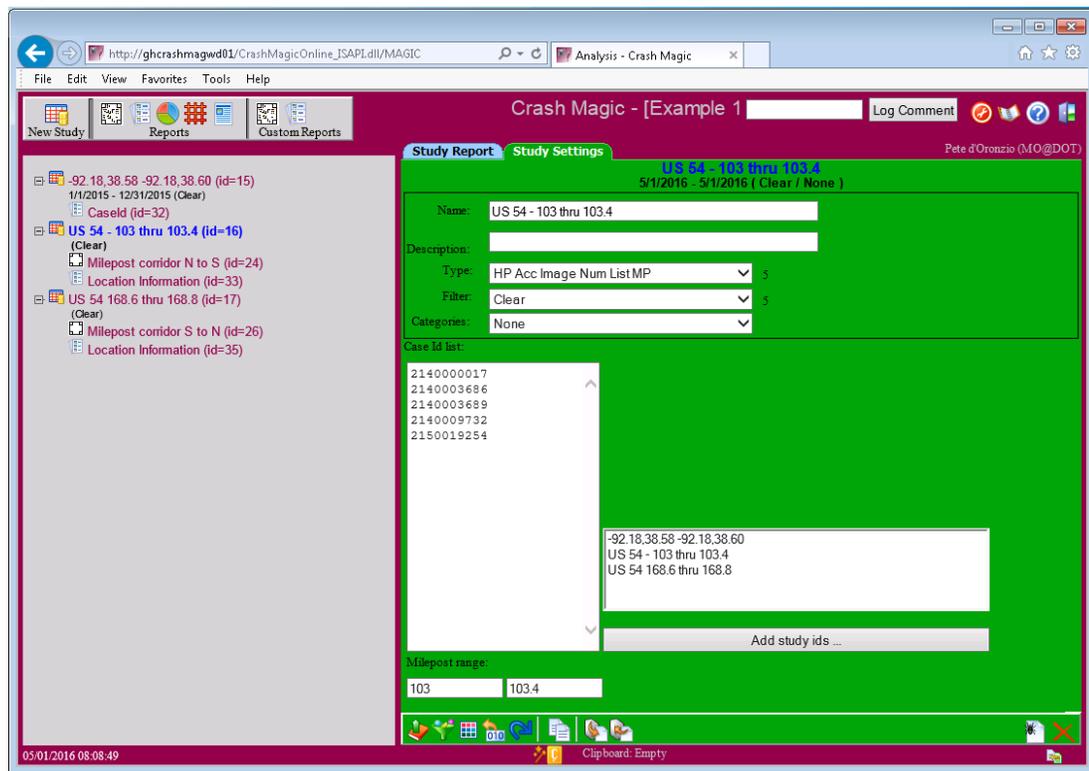
- The project name is in brackets in the top center of the screen. [Main] A project is a group of studies and reports.
- As study is the starting point for any report or analysis. A study is used to specify the data to be studied
- The tree on the left contains all the studies in the current project.
- There is no need to create a new study, or new report if one already exists that satisfies your needs, or can be modified to satisfy your need.
- In order to see the reports and custom reports buttons, a study or report within a study must be selected. (will be blue in the tree)
- Every report screen has at least a blue report tab and a green settings tab.
- The buttons below the report are for actions that relate to the current study or report

1.4 Studies / Selecting data

- This is an study of type "Lat Long" where the data being gathered is specified by a rectangle



- A filter may be used to limit crashes in a study, such as to specify severity or travel direction
- This is a study of type "HP Acc Image Num List MP", meaning that the records are directly specified using crash id numbers. There are two of these types of studies. One does not contain the suffix "MP". The MP designator simply provides two additional inputs to specify starting and ending milepost values. These values are not used for querying, but merely for preparing the appropriate length for the collision diagram report.



- Case Id - based studies like this one are also capable of being combined with other studies by selecting the desired study and adding its case numbers.
- This type of study also provides the ability to explicitly remove case id numbers if desired.

1.5 Collision diagrams I

Once a study has been created, reports may be created.

- A diagram is created by clicking on the collision diagram button in the Reports toolbar.

The screenshot shows the Crash Magic software interface. The main window displays a diagram report for 'MLK at Jefferson' (1/1/2010 - 12/31/2015). The diagram shows a four-way intersection with 38 crashes. A legend below the diagram lists various crash types and objects. On the right, a case details panel for Caseid 0100016243 provides location and accident information.

Crash Magic - [Example 7]

MLK at Jefferson
1/1/2010 - 12/31/2015 (Clear / None)

38 crashes (Clear)

Legend:

- Straight
- Stopped
- Unknown
- Backing
- Overtaking
- Sideswipe
- Parked
- Erratic
- Out of control
- Right turn
- Left turn
- U-turn
- Pedestrian
- Bicycle
- Injury
- Fatality
- DUI
- Fixed objects: General, Pole, Signal, Tree, Curb, Animal
- 3rd vehicle
- Extra data

Caseid 0100016243

Google Map

Landed_Latitude 38.6379
Landed_Longitude -90.2128
Gps_Latitude
Gps_Longitude
No_Of_Vehicles 2
On_Location_Street Cst Jefferson Ave
At_Location_Street Cst Dr Martin Luther King Dr
Date 2/9/2010
Time 12:1 Am
Accident_Type Motor Vehicle In Transport
Two_Veh_Analysis Front To Rear
Pre Crash Trvl Dir V1 North

- The default Four Way Intersection template can be changed on the settings tab by choosing a different "schematic"

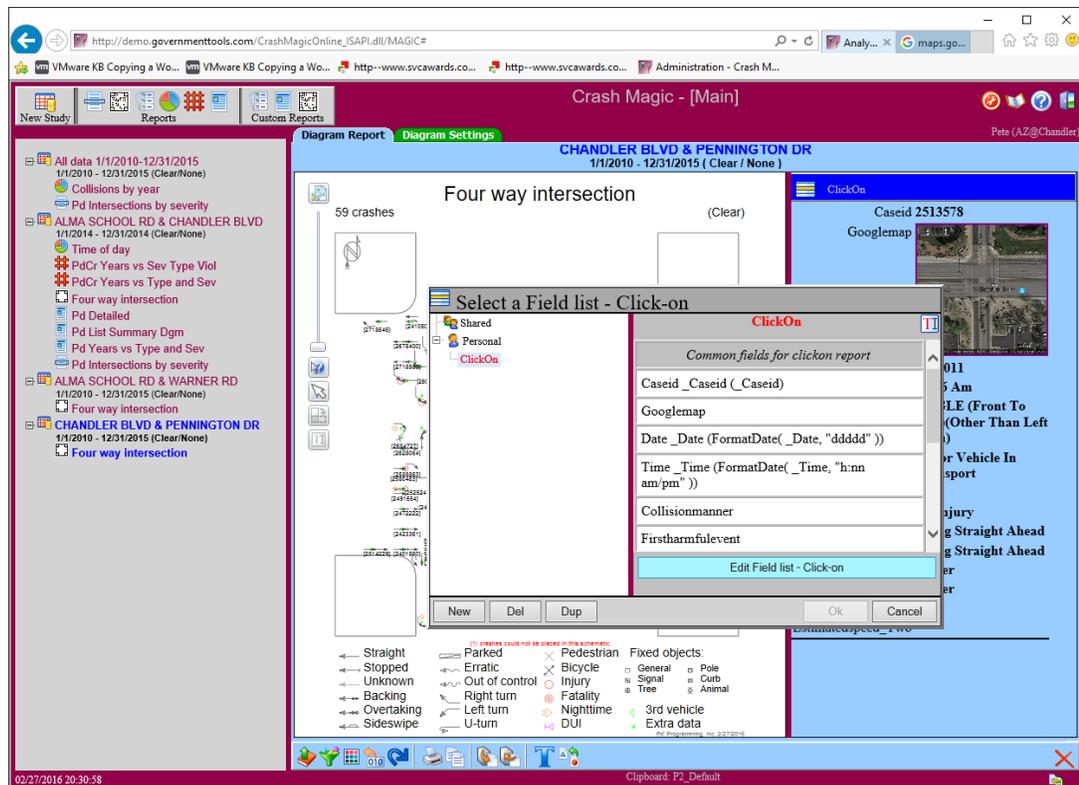
The screenshot shows the Crash Magic software interface with the 'Diagram Report' settings tab selected. The settings list various intersection types and their configurations. The 'Schematic' dropdown menu is open, showing a list of options.

Crash Magic - [Main]

Diagram Report

Name: Int_4/2_Turn/N_S
Description: Int_4/4_Turn/Lanes/Normal
Spacing: Int_4/E_W_Bld
Per width: Int_4/Lanes/E_W_Bld
Schematic: Int_4/Lanes/N_S_Bld
Background: Int_4/N_S_Bld
Label settings: Int_4/Normal
color: Int_4/Normal
content: Int_4/Shallow/Normal
size: Int_8/Normal
Object Map: Int_7/1_Turn/East
Primitives: Int_7/1_Turn/Lanes/East
Reset Crashes Remove Annotations

- The ClickOn report is a list of fields that can be modified. ClickOn reports can also reference images stored within the crash database.



2 Section 2

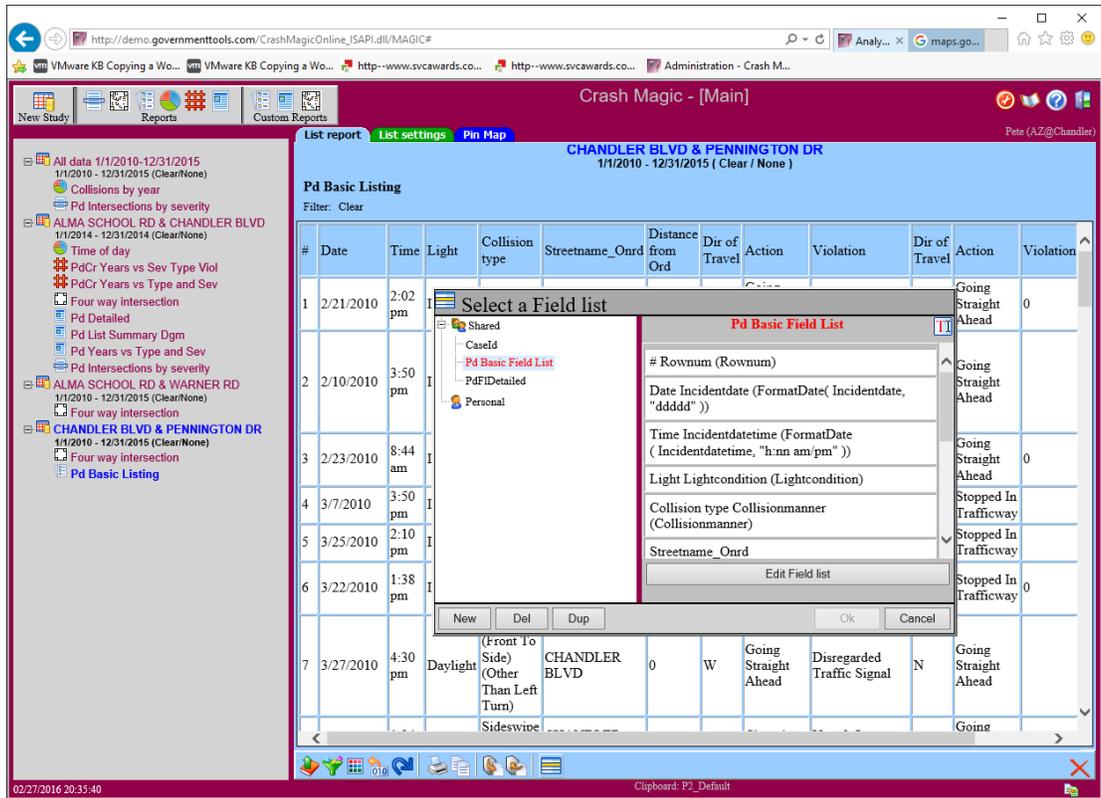
2.1 Tabular listing reports

- A listing report is a tabular listing of chosen fields. The list may be sorted from the settings tab and/or highlighted using the study category list.

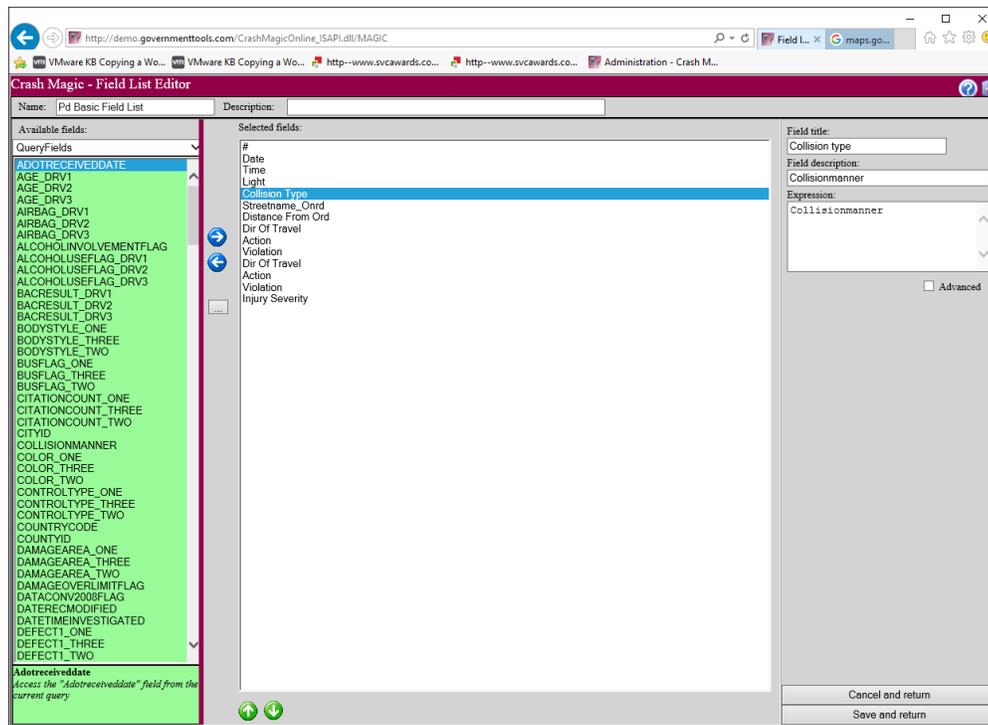
The screenshot shows the 'Crash Magic - [Main]' application window. On the left is a navigation tree with options like 'All data 1/1/2010-12/31/2015', 'Collisions by year', and 'Pd Intersections by severity'. The main area displays a 'Pd Basic Listing' for 'CHANDLER BLVD & PENNINGTON DR' from 1/1/2010 to 12/31/2015. A table lists 7 incidents with the following data:

#	Date	Time	Light	Collision type	Streetname_Ornd	Distance from Ord	Dir of Travel	Action	Violation	Dir of Travel	Action	Violation
1	2/21/2010	2:02 pm	Daylight	Rear End	CHANDLER BLVD	20	W	Going Straight Ahead	Speed To Fast For Conditions	W	Going Straight Ahead	0
2	2/10/2010	3:50 pm	Daylight	ANGLE (Front To Side) (Other Than Left Turn)	CHANDLER BLVD	0	E	Going Straight Ahead	Disregarded Traffic Signal	S	Going Straight Ahead	
3	2/23/2010	8:44 am	Daylight	Left Turn	CHANDLER BLVD	0	S	Going Straight Ahead	Disregarded Traffic Signal	E	Going Straight Ahead	0
4	3/7/2010	3:50 pm	Daylight	Left Turn	PENNINGTON DR	-25	S	Making Right Turn	Speed To Fast For Conditions	N	Stopped In Trafficway	
5	3/25/2010	2:10 pm	Daylight	Rear End	CHANDLER BLVD	0	W	Slowing In Trafficway	Speed To Fast For Conditions	W	Stopped In Trafficway	
6	3/22/2010	1:38 pm	Daylight	Rear End	CHANDLER BLVD	-10	E	Going Straight Ahead	Inattention Distraction	E	Stopped In Trafficway	0
7	3/27/2010	4:30 pm	Daylight	ANGLE (Front To Side) (Other Than Left Turn)	CHANDLER BLVD	0	W	Going Straight Ahead	Disregarded Traffic Signal	N	Going Straight Ahead	

- Fields for the tabular listing are selected from the field list dialog



- Selecting Edit Field List enables selection the desired fields. Note, unless you are an administrator, you can only edit "personal" resources. All newly created field lists will be placed in your personal account. Use Dup or New to create your own field list that can be edited.



- The pick list on the left contains several lists. Most of the time, you will want "QueryFields" which contains the fields from your database. The other categories are called "calculated fields" and are derived from your QueryFields.
- Simply select one or more fields from the green area and use the blue button to select them for display.
- Change the column titles by editing "Field title"
- With the "Advanced" checkbox selected, clear the "Custom Lookup Value" in order to display raw field codes rather than English lookups.

2.2 Filters

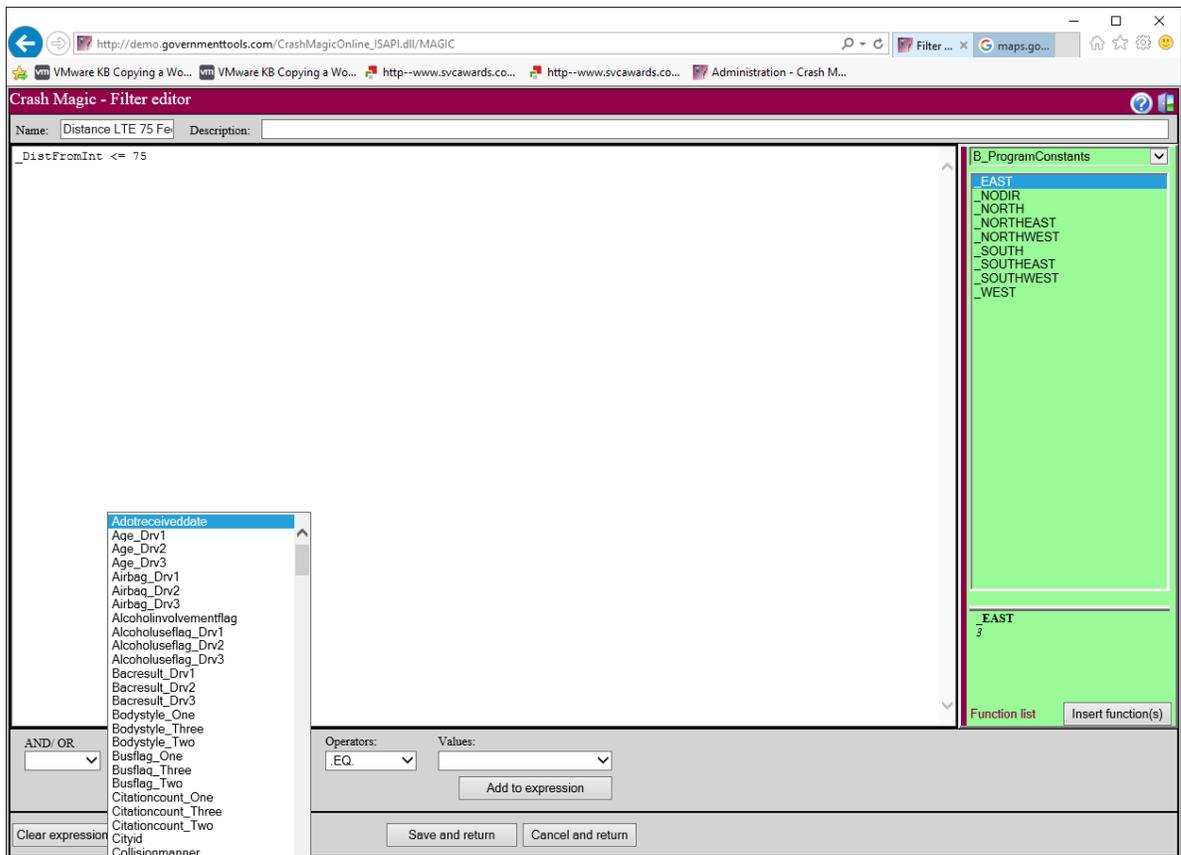
Data in each study may be limited by using filters. A common use of a filter is to limit the distance from intersection. Existing filters may be selected from the Filter dialog, or new filters may be created.

The screenshot shows the 'Crash Magic - [Main]' application window. The main area displays a 'Pd Basic Listing' for the intersection of Chandler Blvd & Pennington Dr. A 'Select a Filter' dialog box is open, showing a list of filters. The selected filter is 'Distance LTE 75 Feet'. The dialog also shows a preview of the filter rule: 'DistFromInt <= 75'. The table below shows the following data:

#	Date	Time	Light	Collision type	Streetname_Onrd	Distance from Ord	Dir of Travel	Action	Violation	Dir of Travel	Action	Violation
1	2/21/2010	2:02 pm	I								Going Straight Ahead	0
2	2/10/2010	3:50 pm	I								Going Straight Ahead	
3	2/23/2010	8:44 am	I								Going Straight Ahead	0
4	3/7/2010	3:50 pm	I								Stopped In Trafficway	
5	3/25/2010	2:10 pm	I								Stopped In Trafficway	
6	3/22/2010	1:38 pm	I								Stopped In Trafficway	0
7	3/27/2010	4:30 pm	Daylight	(Front To Side) (Other Than Left Turn) Sideswipe	CHANDLER BLVD	0	W	Going Straight Ahead	Disregarded Traffic Signal	N	Going Straight Ahead	

- Filter names may be changed by clicking the button in the top right of the selection dialog, just next to the filter name.
- As with the other selection dialogs, only administrators may modify shared resources. Most of your filters will be in your personal account.
- Once a filter, or any resource is created, it may be reused simply by selecting it.

To edit a filter, first create a new one, or duplicate an existing one. Then press the "Edit Filter" button. This is the filter editor:

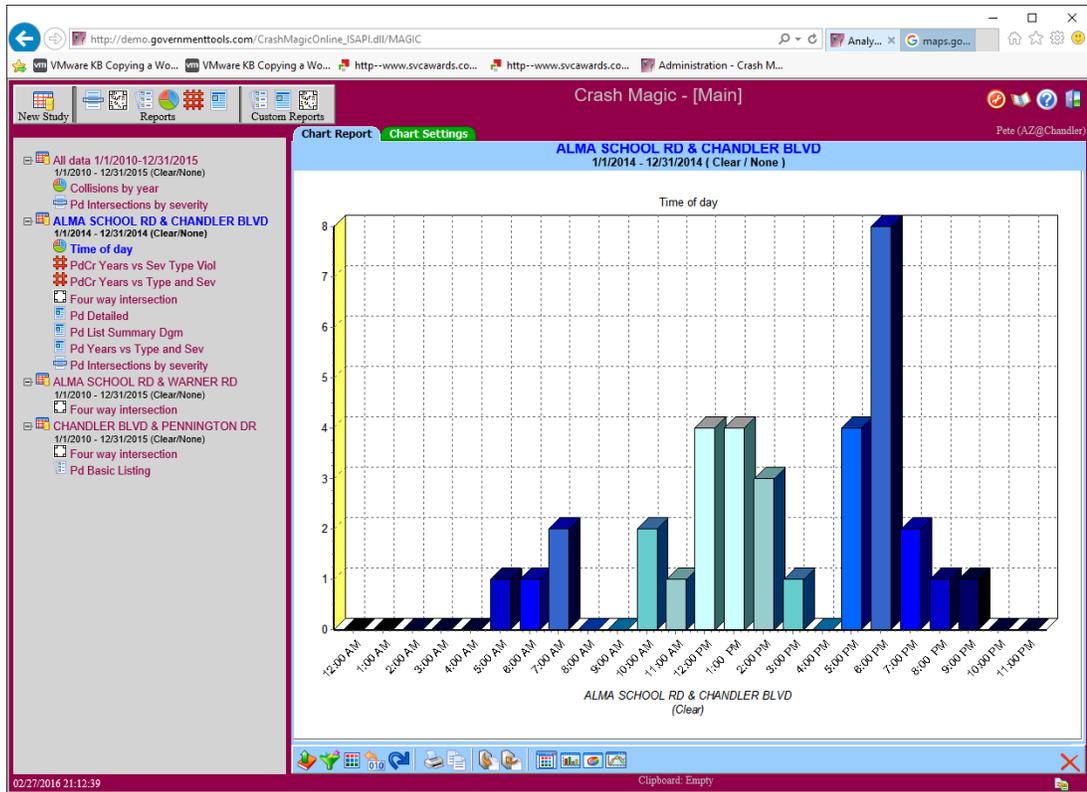


- The filter editor accommodates simple to complex filters. The easiest way to create filters is to simply select a field name and value and "Add to expression".
- A more complex filter may incorporate .AND. .OR and other operators or even functions.
- Once again, the green area contains calculated fields as well as the function library.

3 Section 3

3.1 Charts

- Charts are created by specifying a "Category List". There are a number of Category Lists included in Crash Magic. You can also create your own.

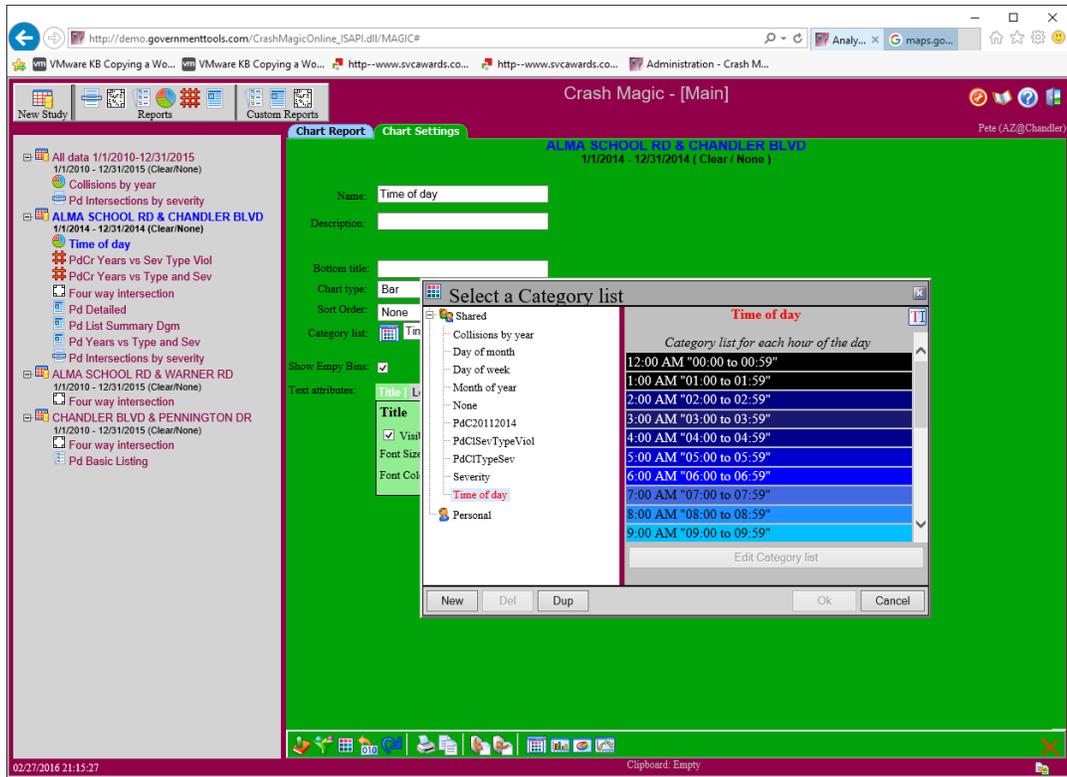


- A chart is defined by its category list, as well as its other settings available on the green settings tab. These include chart type, font settings, label placement and visibility, sorting and inclusion of empty bins.

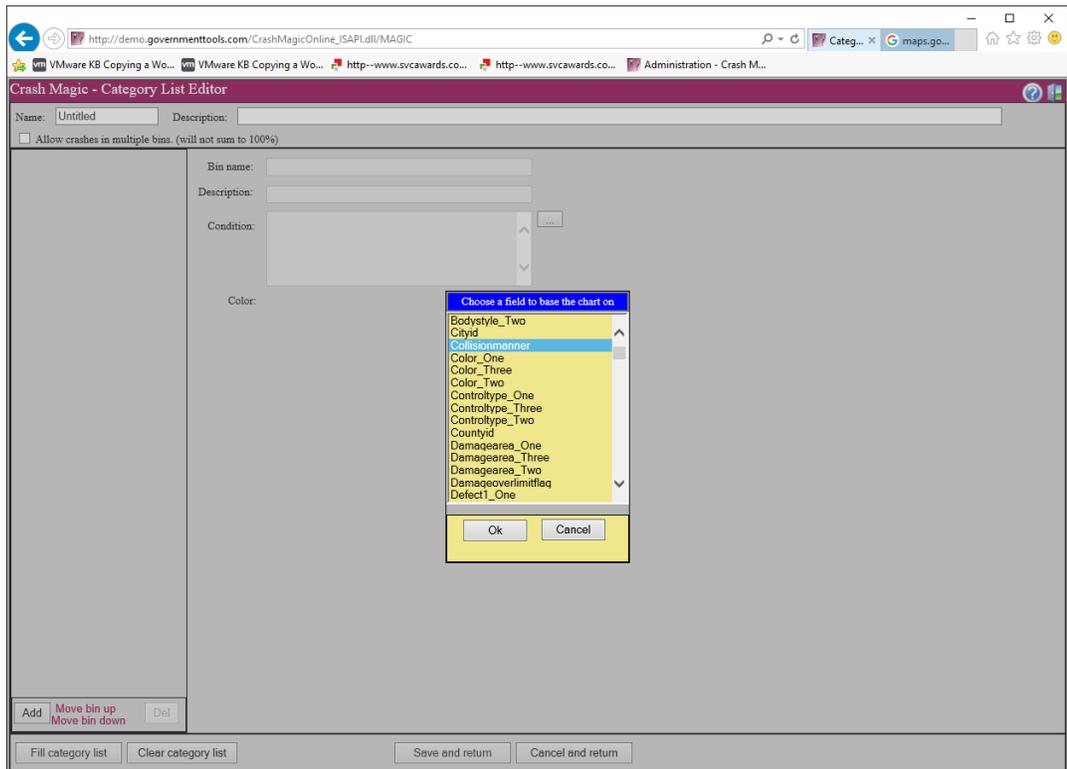
The screenshot displays the 'Crash Magic - [Main]' application window. The interface is divided into several sections:

- Left Panel:** A tree view showing a hierarchy of reports. The selected path is: 'ALMA SCHOOL RD & CHANDLER BLVD' > 'Time of day'.
- Top Panel:** 'Chart Report' and 'Chart Settings' tabs are visible. The current report title is 'ALMA SCHOOL RD & CHANDLER BLVD' with a date range of '1/1/2014 - 12/31/2014'.
- Chart Settings Panel:** This panel is used to configure the chart's appearance and data. It includes:
 - Name:** 'Time of day'
 - Description:** (empty)
 - Bottom title:** (empty)
 - Chart type:** 'Bar' (selected in a dropdown)
 - Sort Order:** 'None' (selected in a dropdown)
 - Category list:** 'Time of day' (selected in a dropdown)
 - Show Empty Bars:**
 - Text attributes:** A sub-panel for styling the chart's text, including:
 - Title:** Visible
 - Font Size:** '10' (selected in a dropdown)
 - Font Color:** 'Black' (selected in a dropdown)
- Bottom Panel:** A toolbar with various icons for navigation and actions. The system tray shows the date '02/27/2016 21:13:45' and the status 'Clipboard: Empty'.

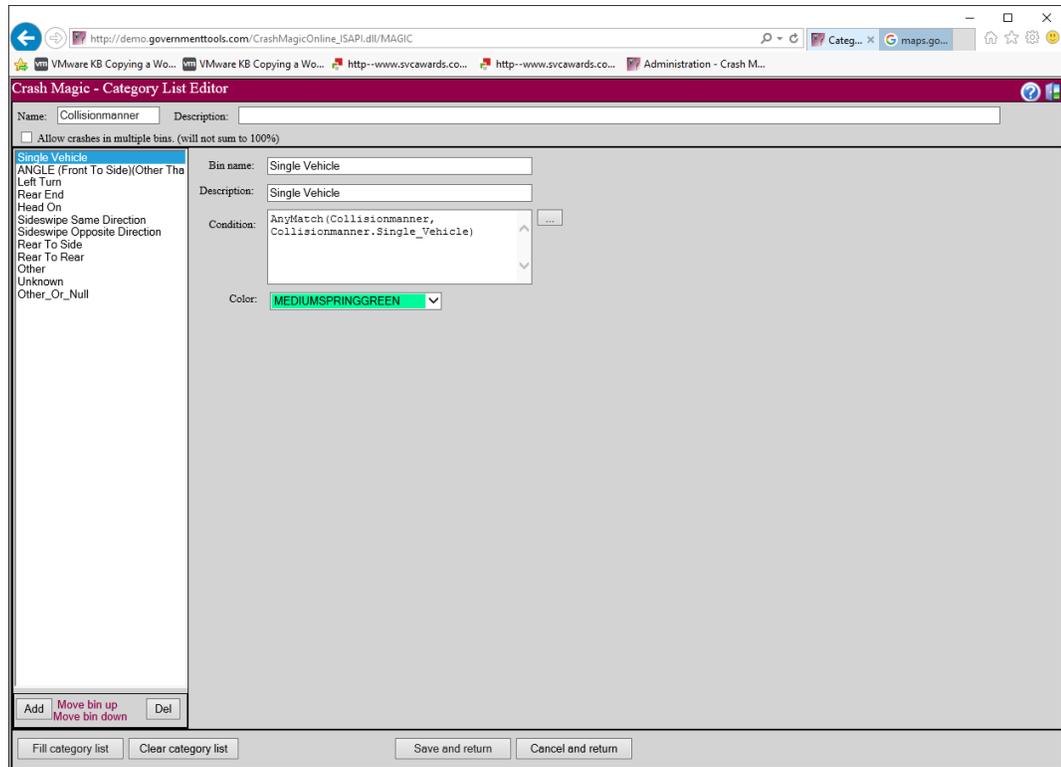
- The chart category list is available from the settings tab, or from the bottom toolbar.



- Category lists, like filters, can be complex or simple. Basic category lists can be created in a single step.

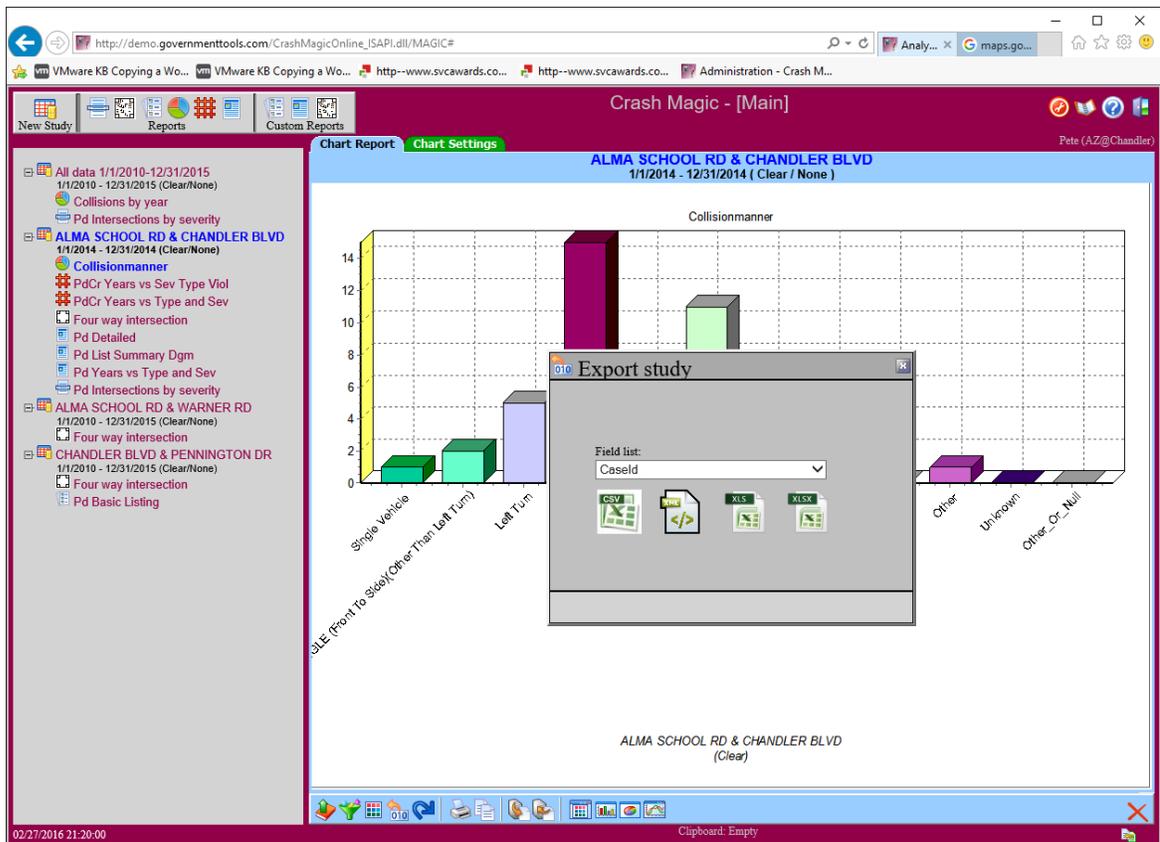


- The resulting category "bins" can be left as-is or edited



3.2 Exporting data

Data can be exported from any study or report. When selecting to export data, you will be prompted for a field list, and for an export format:

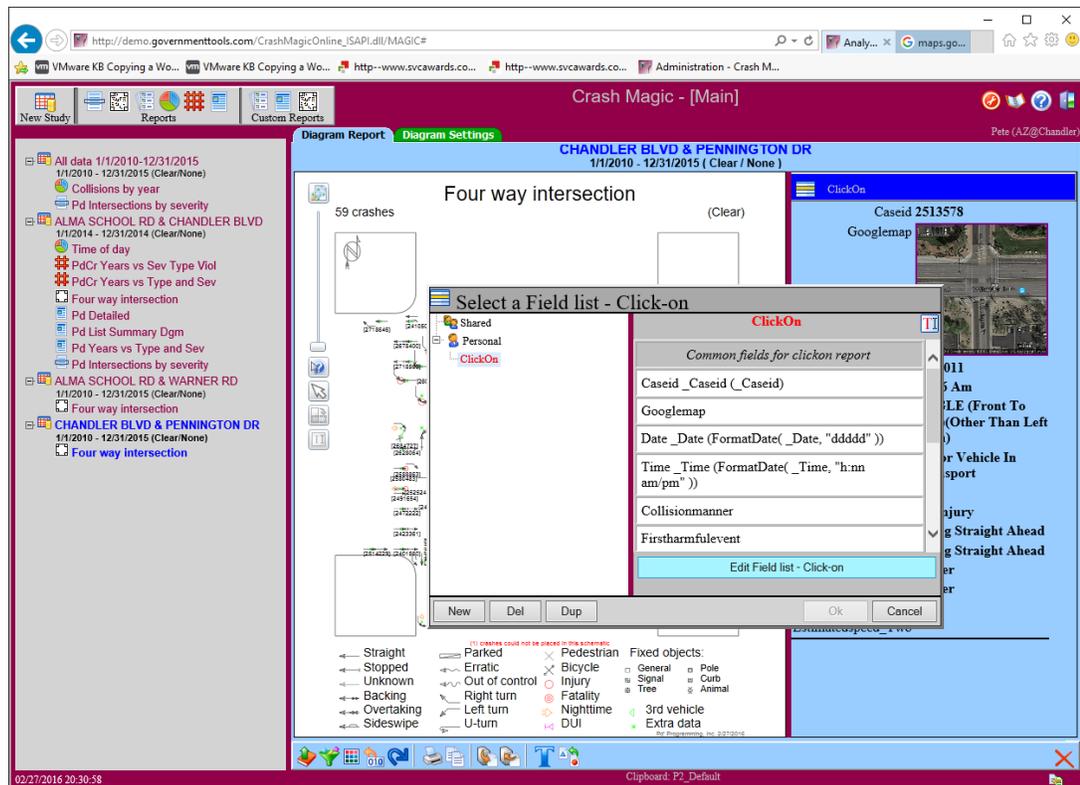


Currently available options are:

- CSV
- XML
- XLS (Excel 2007)
- XLSX (Current Excel)

3.3 Collision diagrams II

- The ClickOn report is a list of fields that can be modified. ClickOn reports can also reference images stored within the crash database.



- Manipulating collision diagrams.
 - Moving
 - Rotating
 - Labeling

4 Section 4

Enter topic text here.

4.1 Wrap up

1. Q & A
2. Contacting Pd' Programming for support
 - Phone: 303-666-7896
 - Email: help@pdmagic.com
 - Forums: <http://pdmagic.forumchitchat.com/>
 - Online mini-trainings