

# Crash Magic Training For Maryland DOT

## Remote training information

When the State of Maryland licensed Crash Magic, it also purchased a 5-day on-site training package for employees of the DOT. Due to Covid-related travel restrictions, Pd' Programming will instead provide a series of live, instructor-led online trainings in June. We will also record these trainings and provide them for your consumption at a later date if desired.

Training will occur in 2 to 3 hour sessions focusing on specific topics spread out over the month of June 2020. There will be an instructor who will be the primary facilitator and a moderator who will introduce the sessions and queue questions for the instructor. (preferably via the chat window) When appropriate, there will be an additional instructor available to assist attendees during hands-on sessions.

### **Attendee roles:**

- **Management**  
Those that will benefit from knowing the capabilities and limitations of the program but will rarely use it themselves.
- **Analysts**  
These users will have access to the full scope of the program and are its primary users. They will need a full overview as well as deep-dive introductions into all aspects of the program.
- **Power users (power users are all Analysts as well)**  
These users will need to understand the most about the program and its uses. They will be responsible for sharing templates; adding/removing users; and have the ability to change the behavior of the program for other users.
- **Programmers, IT and DBAs**  
This group of users are responsible for integrating Crash Magic with your inhouse hardware and software systems; maintaining the server(s) and databases. They should also receive an overview and some general administration information. They will likely prefer more ad-hoc Q&A than instruction. Because of this, it may be best to include them in the same session initially and decide if a break-out is necessary. At a minimum, they will mostly understand each other's questions and the answers.

### **Training sessions:**

#### **Crash Magic Overview for managers**

Time	Intended roles	Lecture v. Q & A	Hands-on
<b>1 hours</b>	<b>All roles</b>	<b>100% lecture</b>	<b>0% hands on</b>

This session will provide an overview all of the functionality of the program. It will include and in fact emphasize enhancements made for the DOT. For the most part, questions will be answered at the highest level, generally without taking questions about specific locations and data. Topics:

- User accounts / roles
- Editing DOT crash data
- Help system
- Studies
- Reports
- Filters

- Projects

## Beginning Crash Magic Overview

Time	Intended roles	Lecture v. Q & A	Hands-on
<b>2 hours</b>	<b>All roles</b>	<b>95% lecture</b>	<b>0% hands on</b>

This session will provide an overview all of the functionality of the program. It will provide a context for the remaining training sessions. It will include and in fact emphasize enhancements made for the DOT. For the most part, questions will be answered at the highest level, generally without taking questions about specific locations and data. Those questions will be recorded by Pd' Programming to be addressed in later sessions as appropriate. Topics:

- User accounts / roles
- Editing DOT crash data
- Help system
- Projects
- Studies
- Reports
- Filters

## Beginning Crash Magic – Studies plus collision diagram and listing reports

Time	Intended roles	Lecture v. Q & A	Hands-on
<b>2.5 hours</b>	<b>Analysts</b>	<b>70% lecture</b>	<b>10% hands on</b>

This session will go into detail on Login, Projects, Studies and Reports and their role in using the program. Questions will be taken during presentation. Topics:

- Logging in; Active Directory
- Help system / manual
- Studies
  - By date, route milepost, coordinate, case id
  - Filters (high level)
  - CaseId, DS\_Key, Report\_No
  - Route Name calculation, Final Log Mile calculation
  - Editing DOT crash data
- Reports
  - Collision diagrams
    - Schematics
    - Labels
    - Click-on
  - Tabular listings
  - Templates

## Beginning Crash Magic – Category list, pin map and layout reports

Time	Intended roles	Lecture v. Q & A	Hands-on
<b>2.5 hours</b>	<b>Analysts</b>	<b>70% lecture</b>	<b>10% hands on</b>

This session will explore the remaining report types. Questions will be taken during presentation. Topics:

- Reports
  - Category list reports
    - Frequency
    - Charts
    - Cross tabs
  - Pin maps
  - Layouts
  - Templates

## Beginning Crash Magic – Hands on

Time	Intended roles	Lecture v. Q & A	Hands-on
<b>3 hours</b>	<b>Analysts</b>	<b>10% lecture</b>	<b>90% hands on</b>

This session will provide a time for analysts to access the functionality in the prior beginning sessions with an instructor available to provide guidance and answer questions.

Attendees will connect to their own accounts and create studies and reports. The instructor will share his screen and/or screens of analysts to answer questions.

Assistance during this session will be limited to beginner topics already discussed. A second hand-on session will follow for more advanced topics.

## Intermediate Crash Magic – Filters, field lists and category lists

Time	Intended roles	Lecture v. Q & A	Hands-on
<b>2.5 hours</b>	<b>Analysts</b>	<b>70% lecture</b>	<b>10% hands on</b>

This session will focus on common program resources and their uses. Topics:

- Filters
  - Selection of existing
  - Filter editor
  - Single field and value expressions
  - Multiple field expressions
- Field list and click-on expressions
  - Selection of existing
  - Captions
  - Field selection
  - Exporting
- Category lists
  - Selection of existing
  - Automatically created

## Intermediate Crash Magic – Collision diagrams

Time	Intended roles	Lecture v. Q & A	Hands-on
<b>2.5 hours</b>	<b>Analysts</b>	<b>70% lecture</b>	<b>10% hands on</b>

This session will focus on collision diagrams. Topics:

- Editing
  - Moving
  - Rotating
  - Exploding
  - Restore
- Click – on
  - Links to images
  - Field selection
  - Field list selection
- Labels
  - Selection from pre-built calculated fields
  - Building from “@” fields
  - Building using expressions
  - Formatting size, color
- Schematics
  - Selection
  - Areas / placement

- Printing
  - Intersections
  - Corridors

### Intermediate Crash Magic – Hands on

Time	Intended roles	Lecture v. Q & A	Hands-on
<b>3 hours</b>	<b>Analysts</b>	<b>10% lecture</b>	<b>90% hands on</b>

This session will provide a time for analysts to access the functionality in the prior beginning and intermediate sessions with an instructor available to provide guidance and answer questions.

Attendees will connect to their own accounts and create studies and reports. The instructor will share his screen and/or screens of analysts to answer questions.

Assistance during this session will be focused on intermediate topics. Beginner questions will be addressed in a different session.

### Administrating Crash Magic – Users and resources

Time	Intended roles	Lecture v. Q & A	Hands-on
<b>2.5 hours</b>	<b>Power users</b>	<b>50% lecture</b>	<b>10% hands on</b>

Several users must be designated as Crash Magic Administrators. These administrators have the ability to add, delete and disable user accounts. They may share resources created by analysts. They have the ability to modify the available options and report formats shared by all users. Topics:

- Logging in
  - From login screen
  - From analysis
  - Active directory
- User groups
  - .config
  - .shared
  - Inheritance
- Adding users
  - Analysts
  - Admin
  - Remote access (REST) accounts
  - Clonable users
- Sharing resources
  - Creating private resources
  - Sharing a resource (move versus copy)
  - Resource components need to be shared too. (tabular list -> field list; chart and frequency report -> category list; cross-tab -> two category lists; layouts -> report templates and related resources)
- Calculated fields
- Report buttons

### System administration Crash Magic – Installing and upgrading

Time	Intended roles	Lecture v. Q & A	Hands-on
<b>1.5 hours</b>	<b>IT</b>	<b>30% lecture</b>	<b>0% hands on</b>

This session will describe and discuss Installing and upgrading Crash Magic. It will also cover system resources used by the program. It is expected to mostly Q & A Topics:

- Crash Magic runs under IIS
- Side-by-side installation
- C:\Program Files (x86)\PdMagic base directory

- Pd' Crash Magic Installer
- cmo, cmoQA, cmoProd, etc. (match with ProgramData)
  - ISAPI – app folder in IIS
- FOP + JDK – PDF renderer
- C:\ProgramData\PdMagic base directory
  - cmo, cmoQA, cmoProd, etc. (match with Program Files)
    - Logs, debug, etc.
    - Pub\Files (exposed via Crash Magic server)
      - Images
      - JS
      - Help
  - cmsvc, cmsvcQA, cmsvcProd, etc (match with Program Files) Web services
  - Installers/cmo contains available install packages
- Desktop utilities installer
  - Data entry
  - Local Viewer
  - Map Magic for ArcMap
  - SQL Viewer
  - Street Node Mapper
  - XML Redactor
  - SQL for XML batch utility
- Installing Crash Magic for the first time
  - Copy files
  - Create local user accounts
  - Set file permissions
  - ISAPI app + .NET services
- Upgrading Crash Magic
  - Shut down IIS application pool
  - Terminate app
  - Copy files
  - Start application pool
  - Maint screen
- Maint screen
  - Database structure updates
  - Resource updates (.Master/.config/.shared)
  - Settings

## Crash Magic integration - Programming and DBA information

Time	Intended roles	Lecture v. Q & A	Hands-on
<b>1.5 hours</b>	<b>Programmer, DBA, IT</b>	<b>30% lecture</b>	<b>0% hands on</b>

This session will be a discussion around integration with Crash Magic and database usage. Topics:

- REST interface
  - Logging in
  - Admin
  - Reporting
- Database connectivity
  - System tables
  - Crash data (read-only)
  - Hybrid tables
- Maint screen
  - Database structure updates