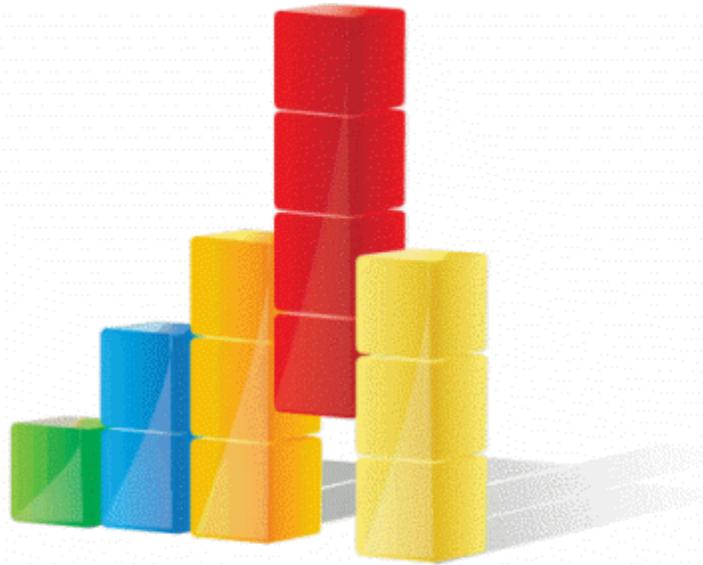


StatsFD



Stats **FD**TM
Serving PC's & Mobile Devices

*"Analyze, Monitor &
Publish"*

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634 39th Avenue NE
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1 1. Introduction to StatsFD

1.



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1.1 Our Mission

Beyond Measurement Into Improvement

By definition analysis focuses on past events. Measurements of performance last quarter, last year and over the last 5-years are valuable, but alone they do not motivate improvement.

Three analytical tasks are required to support performance improvement:

1. Historical analysis
2. Monitoring performance trends in real time
3. Frequent and targeted communication with personnel at all levels

StatsFD addresses each of these three tasks with tools to analyze, monitor and publish.

Simply put, the mission of **StatsFD** is to help you bridge the gap between measuring performance and improving performance.

The button below is a video button. Click on the button to see an overview video.



Other buttons throughout this documentation will link to related **StatsFD** videos.

If you are reading this documentation on paper and wish to have access the the referenced videos go to:

www.statsfd.com

Click on the Upgrade link on the home page and download updated documentation.

1.2 Analyze

Automatic Analysis

The ability to generate "fast & easy" calculations is a good thing. But when you analyze you are looking for patterns. And patterns require many calculations.

StatsFD performs fast & easy calculations - automatically. But it also includes extensive operational reports that combine many calculations into a format designed to make it easy to spot trends and patterns. Two of these operational reports, the "Jurisdictional Profile" and "Benchmarks & Baselines" are available for data analysis. Another, the "Trend Analyzer" is available for monitoring your operation.

Click on the button below to see an overview of **StatsFD** analysis.



Jurisdictional Profile

The "Jurisdictional Profile" measures the following accreditation calculations:

1. Demand
2. Distribution
3. Distribution / Shift
4. Concentration

Here's an example of a Distribution calculation for Station 4. The same layout is used for department, station and individual company performance. Here distribution measures performance based on goals set by your fire department. Compliance percentages 90% or greater are colored green; 80% or better yellow and less than 80% red:

There will be more on the Jurisdictional Profile in [Chapter 4](#).

Distribution Matrix		Station 4		01/01/10 - 12/31/10	
Station Distribution by Performance Type				2010 All Incidents	
Call Processing @ 01:30	Turnout @ 02:00	Travel @ 04:00	Call to Arrival @ 07:30		
77.1%	93.9%	64.9%	82.2%		
Compared to Department % Other Incidents					
-2.8%	2.1%	-1.8%	-1.1%		
02:04	01:51	05:44	08:24		
for 90% compliance	for 90% compliance	for 90% compliance	for 90% compliance		
3,365 / 999	3,983 / 259	2,752 / 1,488	3,600 / 781		
Pass / Fail	Pass / Fail	Pass / Fail	Pass / Fail		
% Compliance Time of Day					
78 / 81 / 74 / 75	80 / 94 / 97 / 96	58 / 63 / 67 / 65	71 / 83 / 84 / 83		
AM1 / AM2 / PM1 / PM2					

Benchmarks & Baselines

Another complex accreditation calculation is the new "Benchmarks & Baselines" calculation.

Benchmarks & Baselines measure for both distribution (1st apparatus arrivals) and concentration (1st, 2nd & ERF arrivals). These calculations are completed for all years, by station for all stations and for all stations for each year. Doing those calculations separately would take hundreds of hours. But with built-in Benchmarks & Baseline reporting it takes less than 5-minutes.

There will be more on the Jurisdictional Profile in [Chapter 4](#).

Here's an example of a concentration page.

ERF Incidents Only

All ERF Incidents					6/19/2013 at 09:25
Overall	Metro	Urban	Suburban	Rural	
86/93% 329 incidents 1st Apparatus Arrival	82/89% 67 incidents 1st Apparatus Arrival	78/88% 69 incidents 1st Apparatus Arrival	85/94% 134 incidents 1st Apparatus Arrival	100/100% 59 incidents 1st Apparatus Arrival	
92/95% 315 incidents 2nd Apparatus Arrival	91/96% 62 incidents 2nd Apparatus Arrival	86/92% 68 incidents 2nd Apparatus Arrival	92/95% 130 incidents 2nd Apparatus Arrival	98/98% 55 incidents 2nd Apparatus Arrival	
98/99% 321 incidents 1st Alarm Arrival	96/100% 63 incidents 1st Alarm Arrival	98/98% 68 incidents 1st Alarm Arrival	98/100% 132 incidents 1st Alarm Arrival	100/100% 58 incidents 1st Alarm Arrival	
47 Building Fires	7 Building Fires	15 Building Fires	15 Building Fires	10 Building Fires	
\$5,229,600 Building Fire Dollar	\$627,500 Building Fire Dollar	\$1,857,400 Building Fire Dollar	\$784,300 Building Fire Dollar	\$1,960,400 Building Fire Dollar	
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Many Analyzers

In addition to the Jurisdictional Profile and new Benchmarks & Baseline reports many specialized "analyzers" are included in **StatsFD**:

- The **Time Analyzer** for fractile reporting and fractile graphs.
- The **Worksheet Analyzer** for spreadsheet-style calculations using any field combination.
- The **GIS Analyzer** for heatmaps, point maps and "D3 District" density studies.
- The **Staffing Analyzer** for assessing staffing stress.
- The **Aid Analyzer** for inter-department and inter-station aid studies.
- The **Simultaneous Incident Analyzer** for response patterns.
- The **Committed Analyzer**.- all selected companies committed studies.
- The **Out of Area Analyzer** for out of station area response patterns.
- The **ERF Analyzer** for Effective Response Force calculations

See [Chapter 4](#) for more information about each of these specialized analyzers.

1.3 Monitor

Monitor What's Happening Right Now

If years pass without any significant improvement in performance you may be

focusing too heavily on the past. Traditional analysis focuses on performance over a month, a quarter or a year, but it's hour-to-hour monitoring and response-by-response follow-up that improves performance.

When **StatsFD** is not being used for historical analysis you can set it to automatically "monitor" your operation. Here's how it works.

When performing manual analysis NFIRS 5 data is loaded first. Other RMS data is then merged into NFIRS 5 data. This process is reversed when **StatsFD** is used to monitor your operation automatically. Here RMS data is imported first. When NFIRS 5 data is complete it is then put in the NFIRS 5 folder where it automatically merges with the RMS data.

Click the button below to see an video about "live" monitoring of operations.



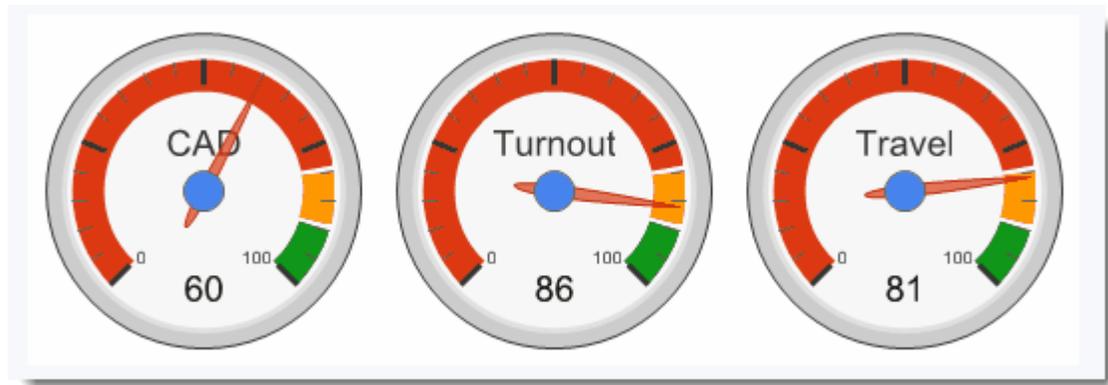
If you purchase a **StatsFD** site license you have the ability to run one copy of the application on a PC server in monitor mode. That server installation can then update all other **StatsFD** installations with RMS and NFIRS 5 data. So several workstations can simultaneously perform historical analysis while the server PC continuously monitors you operation and continuously sync's new data to the analysis workstations.

Analysis vs. Monitoring

Analysis calculates performance over a given time period. For example, "E12's Compliance with a 90 second turnout time objective was 87% last year." Monitoring, however, uses trends to identify what's happening today.

When monitoring performance **StatsFD** first establishes a 90-day base calculation. Using the example above let's say over the past 90-days turnout compliance for E12 was 88%. But to tell how turnout time is trending we need a second calculation. Here we look at performance over the past 7-days. If E12's turnout time compliance for the past 7-days is 93% then we see that turnout time compliance for E12 is trending up by 5%.

StatsFD uses gauges to measure trends by comparing performance compliance for the past 24-hours with performance compliance for the past 72-hours. Again a trend is established by comparing a longer, less contemporary measurement with a shorter more contemporary measurement.



Another way to monitor performance is to look at individual responses and logging those responses where goals were missed.

Here's an example of a chart that tracks missed turnout time goals by company and response:

Missed Turnout Goals - 3 Days

Related links are listed below the chart. If you wish to explore other demand and performance areas click on a tab above.

This table lists all Incidents that failed the Turnout goal. Click on a column title to sort. Only valid turnout timestamps are listed.

Incident #	Date_Time	Company	Location	Inc Type	Secs	MM:SS
1 0029080	2012_05/18_04:14	E1	412 S Jackson	321	0181	03:01
2 0029005	2012_05/17_15:35	E4	1721 E Hoover	321	0162	02:42
3 0029082	2012_05/18_05:42	E7	3678 E Van Buren BLVD	321	0144	02:24
4 0028913	2012_05/17_05:50	E1	207 N Madison AVE	321	0140	02:20
5 0028705	2012_05/16_05:56	E1	900 S Roosevelt PKY	321	0140	02:20
6 0029067	2012_05/18_00:36	R6	775 Madison	321	0136	02:16
7 0029141	2012_05/18_12:32	R1	Cleveland & McKinley	324	0132	02:12
8 0028892	2012_05/17_00:04	R1	Ford & Reagan	321	0131	02:11
9 0028683	2012_05/16_00:49	E3	1045 N Arthur	321	0131	02:11
10 0028907	2012_05/17_03:34	R6	1742 Jefferson	321	0128	02:08
11 0029069	2012_05/18_00:51	E3	965 N Monroe ST	321	0126	02:06

Monitoring mode gives you the hour-to-hour information necessary to address opportunities for improvement as they occur.

1.4 Publish

Push Information to Mobile Devices

Publishing used to mean moving information onto paper so it could be duplicated and distributed. The Internet introduced electronic publishing speeding information dissemination to PCs. Today even that definition has evolved to include dissemination of information to mobile devices.

Click the video button below to see a video about publishing to **StatsFD's** dashboard.



StatsFD has been designed to publish information directly to the following devices:

- PCs
- iPads
- iPhones
- Android phones
- Android tablets

In addition, **StatsFD** can send narrative reports via email and text messaging. **StatsFD** publishes reports automatically on a schedule you set. Reports can be targeted to specific users and are "pushed" so little has to be done to see report updates.

Here's an example of the Trend Analysis report that's automatically "printed" to PDF daily. The report outlines trends comparing, among other things, performance over the past 7-days to performance over the past 90-days. The difference in performance for these time periods tell you whether performance is trending better or worse.

Here's an example page from the report illustrating performance by shift in a station area. Notice performance is color-coded with performance drops colored in red.

Emergency Responses Only

Trends by Shift		Station ID: S01			8/22/2013 at 10:25
1st Apparatus Arrival Performance		Emergency Responses Only			
Call Processing 91 / 89% Compliance 90 / 7	Turnout 51 / 47% Compliance 90 / 7	Travel 88 / 88% Compliance 90 / 7	Dispatch to Arrival 85 / 89% Compliance 90 / 7	Call to Arrival 88 / 97% Compliance 90 / 7	
-1.9% Shift A Change 90 to 7 Days	-16.7% Shift A Change 90 to 7 Days	-3.5% Shift A Change 90 to 7 Days	-5.1% Shift A Change 90 to 7 Days	0.4% Shift A Change 90 to 7 Days	
-2.4% Shift B Change 90 to 7 Days	1.8% Shift B Change 90 to 7 Days	-2.4% Shift B Change 90 to 7 Days	2.6% Shift B Change 90 to 7 Days	11.4% Shift B Change 90 to 7 Days	
-1.2% Shift C Change 90 to 7 Days	-19.9% Shift C Change 90 to 7 Days	9.2% Shift C Change 90 to 7 Days	12.9% Shift C Change 90 to 7 Days	12.3% Shift C Change 90 to 7 Days	

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There will be more on the Trend Analyzer in [Chapter 5](#).

2 2. Setup & Load

2.



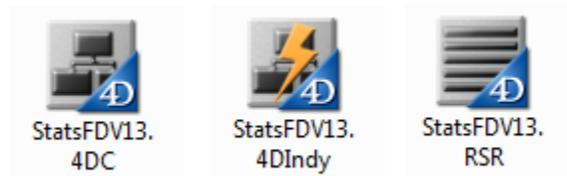
- * [Install](#)
 - * [License](#)
 - * [Setup Local Folders](#)
 - * [Download PDFCreator](#)
 - * [Load NFIRS 5 Data](#)
 - * [Search for Records](#)
 - * [Create Basic Reports](#)
-

2.1 Install Files

Overview of *StatsFD* Files

StatsFD is flexible. It does not require an installation program because all of the files necessary to run **StatsFD** are contained in the **StatsFD** application folder. To move **StatsFD** from one PC to another simply copy the application folder to a USB drive. Move the USB drive to another PC and copy the **StatsFD** application folder from the USB drive to the new PC.

The **StatsFD** installation folder contains a "Database" sub-folder. This sub-folder contains 6 critical files. The first 3 critical files are the database structure files. These files control how the database looks and works. These are the files that are replaced when you perform an upgrade on **StatsFD**:



"StatsFDV13.4DC" & "StatsFDV13.RSR" provide the Structure while the "StatsFDV13.4DIndy" is an index file that will automatically replace itself if it is deleted or the other two files are upgraded.

The next set of files are the data files. Here the "StatsFDV13.4DD" and "StatsFDV13.4DR" contain your data. The "StatsFDV13.4DIndx" is a data index file the again automatically replaces itself if it is deleted.



The data files above are never replace during an upgrade.

You start **StatsFD** by opening the application folder and double-clicking on the "StatsFDV13.exe" (or StatsFDV13, if you are hiding your file extensions). You can set a desktop shortcut by right-clicking on "StatsFDV13" and selecting "Create Shortcut...". Move the shortcut to the desktop after you create it.

Install **StatsFD** Using the Installation File

If you have downloaded an installation executable from the www.statsfd.com web site or you have received the installation file on a CD here's how to install the application:

1. Copy the "StatsFDV13.exe" installation file onto your computer's hard drive.
2. Double-click on the installation file to start the installation process.
3. Follow the instructions on the screen.
4. The installation process will create an **StatsFD** icon on your desktop.
5. Double-click on the **StatsFD** icon to start the application.

Install **StatsFD** from a Zipped File

Some fire departments have security restrictions that abort the downloading of executable files over the Internet. If you were unable to download the installer file you can still download the "StatsFDV13.zip (zipped file).

Here's how to install **StatsFD** from a zip file:

1. Copy the "StatsFDV13.zip" file onto your computer's hard drive.
2. Right-click on the zipped file and select the option to extract the file.
3. After it extracts into a regular file folder put the folder in Documents or My Documents.
4. Open the extracted **StatsFD** folder and right-click on the StatsFDV13.exe file. Select "Create a shortcut...".
5. Put the **StatsFD** shortcut file on your desktop.
6. Double-click on the **StatsFD** shortcut file on the desktop to start the application.

Security Notice:

If you installed the demo on the C: drive in the Program Files folder and the program fails to start you may have a security conflict. To test right-click on the start icon and select "Run as Administrator". If the program runs OK you have your system security set to require administrator access to run applications in the Program Files folder. Just move the application folder into My Documents and reset the desktop shortcut to the "StatsFDV13.exe" file in the installation folder.

2.2 License

How **StatsFD** Licensing Works

Until licensed **StatsFD** operates in demo mode.

Click on the button below to see how to install and license **StatsFD**.



A **StatsFD** license has two parts. The first is a paragraph of encrypted text. The second is a 7-digit serial number. You may receive the encrypted text and serial

number in a **MS Word** license document or you may receive the license information in an email. Either way the license works the same way. Here's how:

1. Copy the paragraph of license text into the clipboard.
2. Start the **StatsFD** application.
3. On **StatsFD's** opening page press the Preferences button.
4. In the lower right you will see two buttons. Press the top button to load the license text from the clipboard.
5. Press the lower button to process the license text.
6. You should now see a dialog asking for the 7-digit license number. Type that number into the dialog.
7. Press the "Accept" button to complete the licensing process.



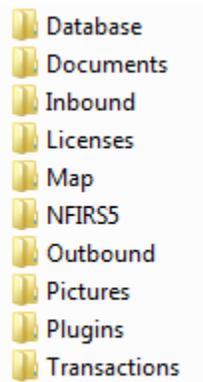
You can confirm **StatsFD** has been properly licensed by looking for your fire department's name in the opening screen of the Operations window.

2.3 Setup Local Folders

What Local Folders Do

StatsFD stores and retrieves files from several folders. Each time it starts **StatsFD** will look for the folders in the **StatsFD** application folder. If it does not find the folders **StatsFD** will automatically create them while it sets and stores the paths to them.

After opening **StatsFD** you should notice the following folders in the **StatsFD** application folder:



Database - Folder contains database structure and data files.

Documents - Stores copies of over-sized documents

Inbound - Used for documents you are loading into StatsFD

Licenses - Stores copies of StatsFD licenses

Map - Used to place mapping files generated by StatsFD.

HTML - Used to saved HTML documents created by StatsFD.

NFIRS5 - Loads NFIRS 5 transaction files you place in this folder

Outbound - Used for documents you are exporting from StatsFD

Pictures - Stores copies of pictures loaded into StatsFD

Plugins - Contains database files and should not be moved or changed.

Transactions - Stores copies of loaded NFIRS 5 transactions

Folder creation and path management should be handled automatically. Once you have installed **StatsFD** it's a good idea not to change the names of any folders so the paths remain accurate.

If you wish to check these paths you may do so by pressing "Preferences" button then the "Local Paths" tab. If you clear the paths the folders will be recreated automatically when your restart **StatsFD**.

2.4 Download PDFCreator

Publish to PDF

StatsFD has the capability to automatically print reports to PDF. In order for this feature to function you must first download and install a free software utility called **PDFCreator**.

PDFCreator can be downloaded on the Internet. Here's the web address:

<http://www.pdfforge.org/pdfcreator>

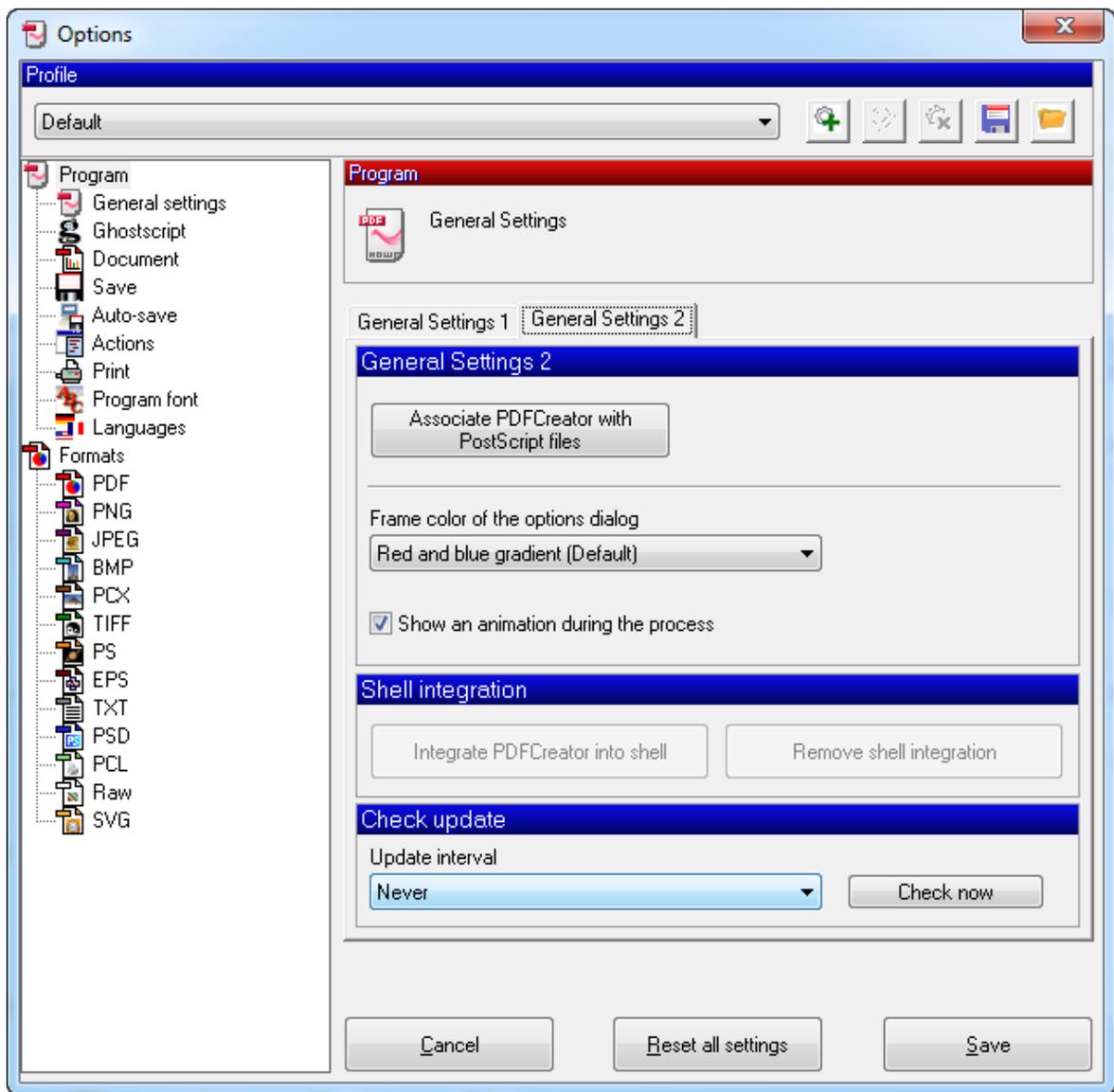
Installation

Note: Be alert for offers associated with the installation of **PDFCreator**. In order to utilize **StatsFD** you only need to install **PDFCreator** and the **Image2PDF** file utility.

After downloading the **PDFCreator** installer double-click on it to start installation .

In general you can use the default setting during the installation settings. Even though you may be installing **PDFCreator** on a server PC, choose the "Standard Installation".

After installation double-click on the **PDFCreator** icon that was installed on your desktop. Under the "Printer" menu select "Options". Then select "General Settings".



Click on the “General Settings 2” tab and set “Check Update - Update Interval” to “Never”.

If **PDFCreator** does not start after clicking on the desktop short-cut, quit all applications and restart the PC. **PDFCreator** should start OK after a computer restart.

Test **PDFCreator** by opening a word processing document and selecting **PDFCreator** as you printer.

2.5 Load NFIRS 5 Data

Your First Data Load

NFIRS 5 data is the data you send to the State Fire Marshal's Office on a monthly or quarterly basis. Loading this data into **StatsFD** couldn't be easier. Inside the **StatsFD** application folder you will find an "NFIRS5" folder.

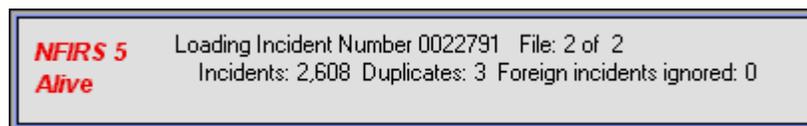
Simply put the NFIRS 5 incident files (one, up to a dozen or so) into the "NFIRS5" folder and press the Load button. **StatsFD** will take it from there.



Click on the button below to see how to load NFIRS 5 data into **StatsFD**:



Never move the "NFIRS5" folder from the **StatsFD** application folder, but if you want easier access to the folder you can make a short-cut of the folder. To do that simply right-click on the folder and select "Create Short-cut". Move the short-cut to the desktop or some other convenient place. You may then place NFIRS 5 incident files either in the "NFIRS5" folder or the short-cut folder you created.



Feel free to make short-cuts of other **StatsFD** folders as necessary. But generally its good practice to keep the original folders in the **StatsFD** application folder.

After record loading you will see a count of the number of records in each NFIRS 5 table. The count is listed at the bottom of the Operations Window in red letters. You may now view your Incidents, Apparatus, Responders, Patients and Contacts records by pressing the appropriate function button.

Pressing Incidents, for example, will display the list of loaded incidents. Fire Incidents are displayed in **red**, EMS incidents in **blue** and other types of incidents are displayed in black.

Co.	Incident	Exp	Date	Time	Location	Type
E-1	004135	000	12/31/2001	23:55	Dock Landing & I-404 North	142 Brush, or brush anc
E-2	004134	000	12/31/2001	23:20	1000 Rodgers ST	460 Accident, potential
E-2	004133	000	12/31/2001	23:11	Nicholas CT	321 EMS call, excluding

You will notice each incident includes information about the number of responding apparatus and fire fighters, Call to Arrival in seconds, the duration of the incident in seconds.

If you double-click on an incident you will see it displayed on a standard NFIRS 5 form. Scroll through the form to see each part of the form. You may print the form you are displaying by pressing the "Print" button. You may view other completed NFIRS 5 forms associated with the incident. Buttons for viewing the Fire, Structure, Hazmat, Arson and other forms will be enabled if the form is present in the incident.

Back at the list view again, you can print a selection of records by highlighting the records you wish to print and pressing the "Print" button. You will see print options on the screen. Select whatever options you wish.

You can highlight a group of records by holding down the **Ctrl** key and clicking on the records you wish to highlight. If you have a large contiguous group of records click on the first record and hold down the **Shift** key. Click on the last record and all records in the group will be highlighted.

Apparatus, Responders and Patient Records

The Apparatus, Responders and Patient functions work just like Incidents. Notice the same color coding and printing options carry-over into these functions.

Apparatus records show individual apparatus responses within your jurisdiction. This is valuable information for analyzing response patterns and work load distribution. If you want to extract the response patterns of individual members that can be done through the Responders function.

EMS operations are tracked in Patients. Since these records do not include any names, the information in this area is far less sensitive than viewing specific medical histories.

2.6 Search for Records

Record Searches are Part of the Reporting Process

Creating reports is a three-step process:

1. Load incidents

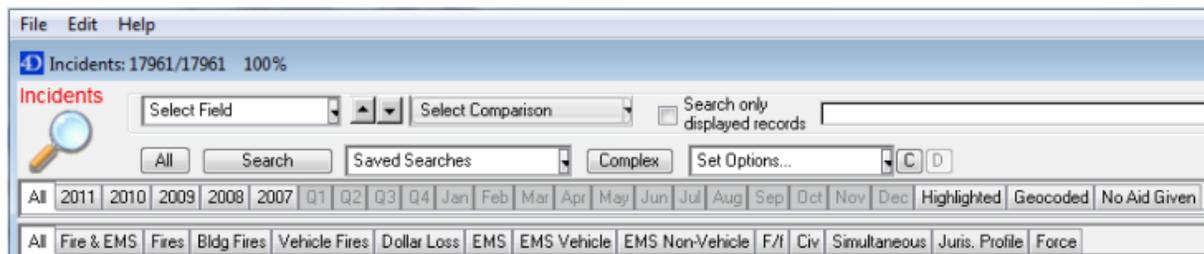
2. Select the incidents you wish to include in your report.
3. Select the reports you wish to generate.

This section focuses on the second step selecting the records you wish to include in your report.

Click on the button below to see how to search for records in **StatsFD**:



StatsFD provides a variety of search tools. All search tools are located at the top of each module's list view:



In the Incidents "list view" above you can see the "Field Search", a drop down list of "Saved Searches" and "Tab Search" areas ready to locate the incidents you need. Let's look at each area.

Every **StatsFD** module contains a field search.



This is the field search tool in Incidents. Begin by selecting the field you wish to use for the search. Next select a comparison like equals, do not equal, is greater than, etc. You may search only in the selection of records being displayed by placing a check in the "Search only displayed records" checkbox. Finally, enter a value for search.

In Incidents many of the field names have additional letters. For example, the "B_" in the name of the "B_IncidentNumber" field indicates the field is a part of the Basic module. Here's the key:

A_ Arson
B_ Basic Module
C_ RMS Data (usually Imported)
F_ Fire Module
HM_ Hazmat Module
S_ Structure Fire Module
W_ Wildland Module

StatsFD utilizes the "@" symbols as a wildcard search character. In any search "value" area, you may use the "@" symbol. For example to locate every street beginning with the characters "West" simply enter:

West@

in the value area of the search. **StatsFD** will locate all streets beginning with the characters to the left of the "@" symbol.

Saved Searches

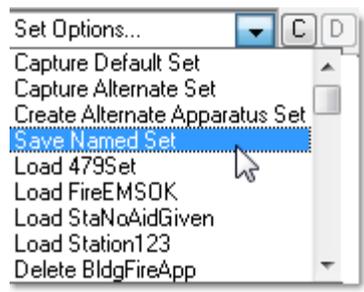
You may create, save and reuse search instructions. To create a new search press the Search button as seen immediately below. To use a search you've created select the search from the "Saved Searches" drop down list.



Saved Searches are not only used in the list views, they can also be used to create "Mobile Script" reports. More on that in [Chapter 6](#).

When you need to create a complex search press the Complex Search button. Complex searches may be saved and recalled as files.

Sets



"Sets" means sets of records. For example, if you search for all non-aid given incidents in a given year that "set" of incident records can be "captured" by pressing

the "C" button. Later on, if you wish to return to that record set simply press the "D" button to display the set.

Click on the button below to see how to use sets in **StatsFD**:



After creating a set of records you wish to save click on the "Set Options..." drop-down list in the list view.

To save the set of records just click on "Save Named Set" and follow instructions naming the set in any way you wish.

If you just wish to save a set of records temporarily you can click on "Capture Default Set". That's the same as clicking on the "C" button in the upper right. Once you've loaded the temporary set you can display the temporary set by clicking on "Display Default Set" (or clicking on the "D" button). Both options are enabled when a default set has been defined.

An "Alternate" set is also a temporary set. It is created and saved by clicking on "Create Alternate Set" to create and "Display Alternate Set" to display.

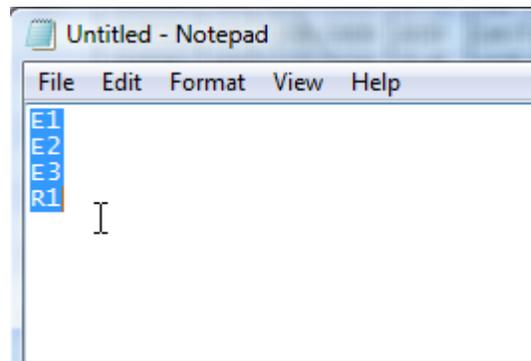
A very powerful set feature is "Create Alternate Apparatus Set". This feature runs in the Incident list view and allows you to create an Alternate set of Apparatus records related to the set of incidents records you selected in Incidents. To display the related Apparatus records go to the Apparatus list view and click on "Display Alternate Set".

Conversely, in the Apparatus list view, you can "Create Alternate Incidents Set". This locates all Incidents related to Apparatus records you selected. Those incidents can be displayed in the Incidents list view by clicking on "Display Alternate Set".

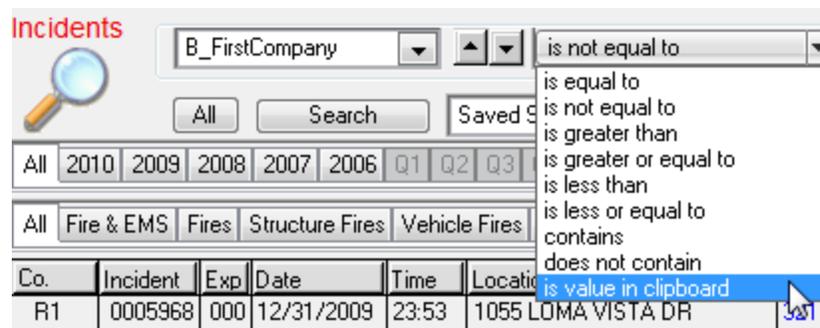
Any named set can be deleted by clicking on the "Delete" title of the set you wish to delete.

Search Shortcut

Here's a real time saver. When you are looking to include a large number of search options simply open Notepad, type the values you wish to search for in a column and copy the values into the clipboard:



Next, select "Is value in clipboard" from the search drop-down list.



If you wish to search in only the displayed records, click in the check box with that name.

And finally, click in the text entry area where you would normally enter a value. The clipboard will automatically be loaded-in as a value and your complex search will be executed in seconds.

The Incidents module has a very powerful tab search function.



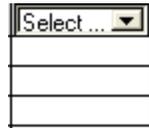
Let's say you wish to create a quarterly report which includes all fire & EMS responses in the 4th quarter of 2010. Here's how you do it:

1. Press the 2010 tab to narrow the search to records for that year.
2. Press Q4 to narrow the search to records in the 4th quarter of 2010.
3. Press the All Fire & EMS tab to narrow the selection to fire & EMS incidents only.

It's that simple; click, click, click. There are lots of searches that can be accomplished with just a few clicks.

Note: Tabs designed for searching by year are automatically updated based on the date in your system clock.

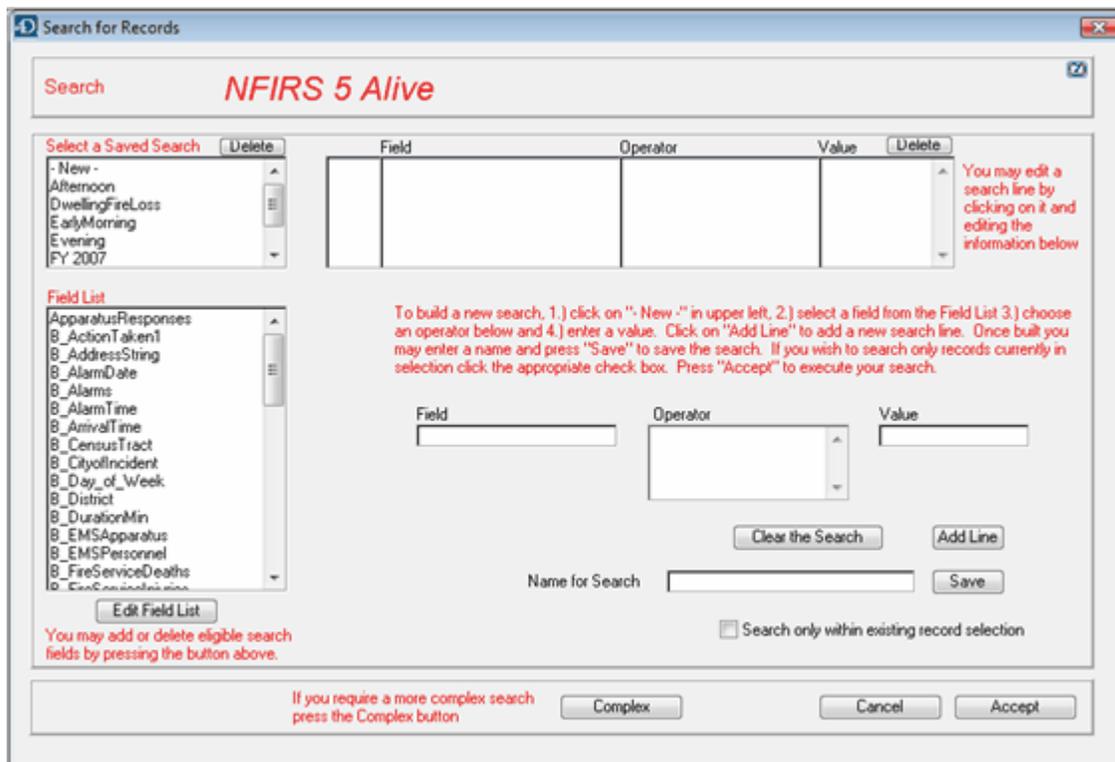
Most **StatsFD** "list view" layouts incorporate a "Select..." field. The "Select..." field allows the user to select any field for display in the list view. The "Select..." field works with the Search field at the top of the layout. If a search is made, data from the field selected for the search is automatically displayed.



If you wish to display the data in a field that's not on the list of fields, simply add the field you wish by pressing the "Search" button in the lower left corner of the list view layout. Then press the "Edit Field List" button to add any field you wish to the list of search fields.

Now the data in nearly any field can be displayed in most list view layouts.

If you want to do a multi-line search or create and save a search, press the "Search" button (or click on the magnifying glass icon) in the upper-left corner of the list view. This brings up the Search Dialog. The same Search Dialog is used in every **StatsFD** table.



Click on a field in the field list on the left side of the screen. That will automatically fill-in the "Field" area. Now select an "Operator" from the drop-down list in the middle. Finally, enter a value in the "Value" area on the right. You can press the "Add Line" button to repeat this process to narrow the search with additional search criteria.

Notice you can name the search and press the "Save" button. The search will be saved and may be reused at any time.

StatsFD utilizes the "@" symbols as a wildcard search character. In any search "value" area, you may use the "@" symbol. For example to locate every street beginning with the characters "West" simply enter:

West@

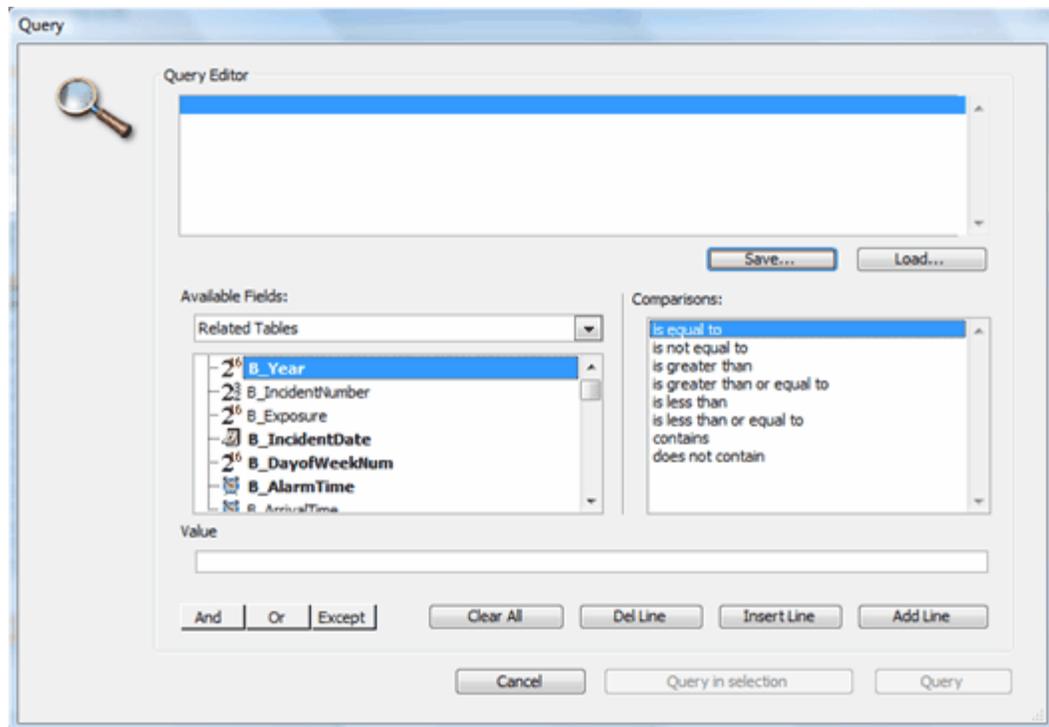
in the value area of the search. **StatsFD** will locate all streets beginning with the characters to the left of the "@" symbol.

The fields that appear in the field search as well as the fields that appear in the Search Dialog are a subset of the fields in the table you are viewing. To add or subtract items in the list of search fields press the "Edit Field List" button. A complete list of fields will appear for the table you are viewing. Fields which appear on the list of search fields will be marked with a "+" symbol. You may click on any of the fields

to add or remove them from the search list.

After editing a field list it's a good idea to leave the function and return to the Operations Window. Leaving the table area and returning will update and save the search list.

If you wish to search by many search criteria press the "Complex Search" button in the Search Dialog. The complex search works like the Search Dialog except you can press the "Add Line" button as many times as you wish.



Notice that Complex Search allows you to save and load search criteria. So if you have an elaborate set of search criteria you can save it and load it in when you need it again.

2.7 Create Basic Reports

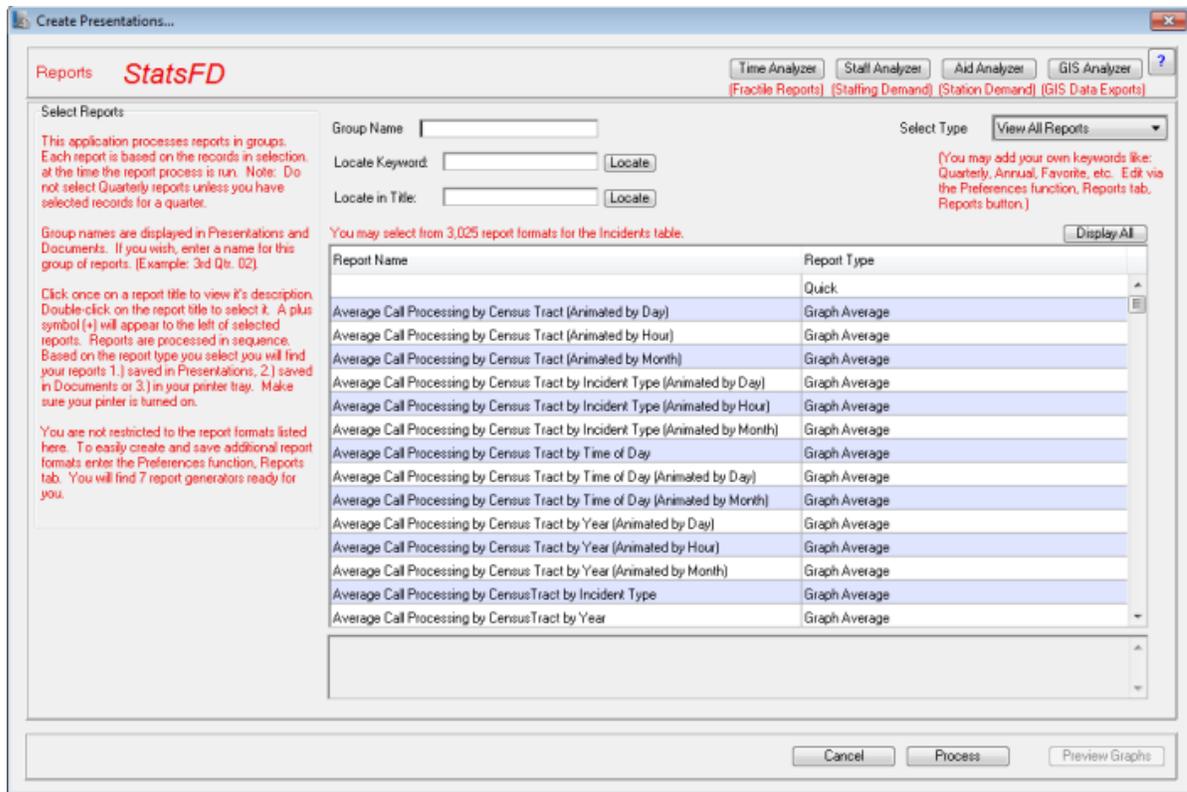
How to Create Basic Reports

Here's a video that takes you through the process of creating a basic report:



Each **StatsFD** function (Incidents, Apparatus, Responders & Patients) has its own set of basic reports. Even if you have only loaded NFIRS 5 data all 7,200 basic reports are available for analysis.

Begin by pressing the Incidents button. Select the Incidents you wish to include in your report. Now simply press the Reports button. Here's a view of what you will see:



1. Locate the predefined reports you wish to view by selecting a report type from the View All Reports drop down. You can also locate report formats by searching for the reports by key words or words used in the report's title.
2. If you wish enter a Group Name for the reports you wish to process. A Group Name is simply a phrase that identifies the group of reports you are processing, example; "3rd Qtr District". When each report in a group is processed, it will display the group name for easy identification.
3. If you click on a report title once you will see a description of the report displayed in the scrolling area below.
4. Double-click on any reports you wish to process. You will notice a "+" symbol is added to the left of the report title to indicate it has been selected.

5. When all the reports have been selected press the Process button to begin report processing.

StatsFD displays report processing activity. If you have selected a large number of reports **StatsFD** will display the number of reports that have been processed as well as the number yet to be processed.

When all reports have been processed you will see a count of the reports that have been saved to Presentations and the number of mapping files that have been saved to the mapping folder.

Graph and numeric reports are always saved to Presentations. However, **StatsFD** also includes report generators which can be used to extract text, for spreadsheets or database file transfers.

3 3. Data Loading Options

3.



- * [Weighing the Options](#)
- * [StatsFD's CAD Table](#)
- * [Manual Importing](#)
- * [Automatic Importing](#)
- * [Automatic ODBC Loading](#)

3.1 Weighing the Options

Options for Loading Data

Many fire departments choose to analyze NFIRS 5 data alone. But this choice has limitations. NFIRS 5 specifications do not differentiate between the time the dispatch center receives a request for assistance and the time an apparatus is dispatched. Either time can be used for "Time of Alarm". In addition, NFIRS 5 specifications do not track the time an apparatus begins to travel to the emergency scene. These limitations make it impossible to accurately calculate:

- Call Processing Time
- Turnout Time
- Travel Time

In order to calculate essential performance measurements we need to acquire the following time stamps:

- The time dispatch center receives request for assistance (Call Timestamp)
- The time each apparatus is dispatched (Dispatch Timestamp)
- The time each apparatus begins responding (Enroute Timestamp)
- The time each apparatus arrives on the scene. (Arrival or OnScene Timestamp)

The time each apparatus clears the scene (Clear Time)

Ironically, for performance analysis, 12 - 20 key fields of apparatus response data can give you most of the data you need for a complete performance analysis. Merging that data with the rich incident descriptions found in NFIRS 5 data give you the best of both worlds. Here are the options you have when using **StatsFD**.

Click on the button below to see options for loading RMS data into **StatsFD**:



Option 1 - Analyze NFIRS 5 Data Alone

This option is the easiest. Simply place your NFIRS 5 data transactions (the one's you send to the State Fire Marshal's Office) into the "NFIRS5" folder created by **StatsFD**. Press the "Load" button and data will be loaded into **StatsFD** and available for analysis. You will be able to search and create reports on every NFIRS 5 data element. Performance analysis, however, will be limited to "Call to Arrival" or "Dispatch to Arrival" (depending on the Time of Alarm timestamp) as well as duration analysis.

Option 1 is a good place to start. You can load your historical NFIRS 5 data to provide several years of data for analysis. You can also run more than 7,200 reports that require NFIRS 5 data only.

Option 2 - Manually Import NFIRS 5 Data and Merge-in RMS Data

This option requires two manual steps; 1.) loading NFIRS 5 data then 2.) loading supplemental times from a file manually created by your RMS system. While it's a two-step process the result is a rich dataset that can be used for performing sophisticated analysis. Generally, people who use this method manually load data monthly, quarterly or annually.

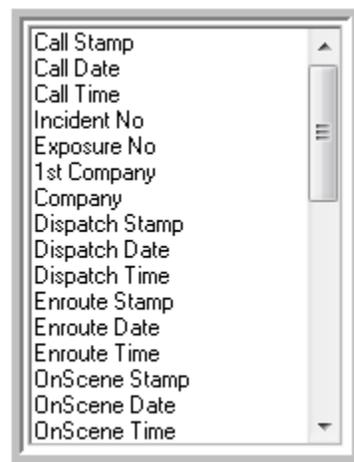
Option 3 - Automatically Import RMS Data then add NFIRS 5 Data

If you want to eliminate manual data loading you can go automatic. If your RMS system can create data files periodically, **StatsFD** can be setup to import those same data files automatically. Some RMS systems use "queries" to define data exports. These queries can be set to export data periodically. Sample queries for some applications are available from Animated Data, Inc..

Option 4 - Automatically Connect to ODBC Data Source then add NFIRS 5 Data

StatsFD now has the ability to automatically load data from any RMS system that uses a SQL server. This option uses a READ ONLY ODBC connection to automatically update **StatsFD** records without having to create export files. The system is very flexible and handles multiple tables. ODBC connections can be set-up manually or you can contact Animated Data for SQL configuration files that may already be available for your RMS system. This option, Option 4, is now the preferred method for obtaining supplemental data from your RMS system.

3.2 StatsFD's CAD Table



How the CAD Table Works

Regardless whether you are importing records from an ODBC connection or importing text files placed in a folder by your RMS system **StatsFD will** utilize a "CAD" table to manage data imported from RMS databases. Here's some general information.

Dates and times are handled in three types of fields called "Stamp", "Date" and "Time". Here are lists of formats supported for each field type:

Stamp

MM/DD/YY HH:MM:SS
MM/DD/YYYY HH:MM:SS
YYYYMMDDHHMMSS
YYMMDDHHMMSS
YYYYMMDD HHMMSS
YYYYMMDD HHMM
YYYY-MM-DD HH:MM:SS.000

YYYY-MM-DD HH:MM:SS
 YYYY-MM-DD HH:MM
 YYYY-MM-DDTHH:MM:SS.000
 YYYY-MM-DDTHH:MM:SS
 YYYY-MM-DDTHH:MM

Date

MM/DD/YY
 MM/DD/YYYY
 YYYY-MM-DD
 YYYYMMDD
 DD-Jul-YYYY
 DD-Jul-YY

Time

HH:MM:SS
 HH:MM
 HHMMSS
 HHMM

The **Call Stamp**, **Call Date** and **Call Time** fields all handle the "Time of Call". That's the time closest to the time the dispatch center first became aware of a request for assistance.

The **Incident No** field is the incident number. Generally this number is 7 or fewer digits. If you attempt to import a number with a "-" character or letters they will automatically be eliminated from the number. Also, any numeric digits greater than 7-digits will have the extra digits automatically removed from the left side of the incident number.

The **Exposure No.** is generally zero unless the incident is an exposure incident. This field is optional.

1st Company is the Vehicle ID for the first vehicle to reach the scene. This is only used with you are importing data directly into the Incidents module only. Otherwise the Company field should receive the Vehicle ID.

The **Company** field is the Vehicle ID field.

Dispatch is the time the responding apparatus is notified of the request for assistance.

Enroute is the time the apparatus begins "wheels-turning" to the scene.

OnScene is the time the apparatus arrives at the scene.

Clear is the time the apparatus clears the incident and becomes available for other assignments.

Responders is a number representing the staffing level of the responding apparatus.

Incident Type is the 3 or 4 digit incident type code, optionally the incident type code can be followed by a single space and the code description.

Shift is the shift on-duty when the incident was received. This value can be automatically determined by **StatsFD**.

Station is the geographic location of the incident by station assignment. It has nothing to do with which apparatus arrived on the scene first.

District, Map Page, FDZ (Fire Demand Zone) are geographic designations assigned by the local fire department.

Latitude & Longitude are decimal X, Y coordinates which designate the location of the incident. Generally "state plane" coordinates are not used.

User Number 1 & 2 are user-defined fields containing a whole number. These fields can be used for any purpose you wish.

User Real 1 & 2 are user-defined fields containing decimal numbers. These fields can be used for any purpose you wish.

User Alpha 1, 2, 3, 4 & 5 are user-defined fields containing letters and / or numbers. These fields can be used for any purpose you wish.

User Time 1, 2 & 3 are user-defined fields containing a time. These fields can be used for any purpose you wish.

Location is the address of the incident.

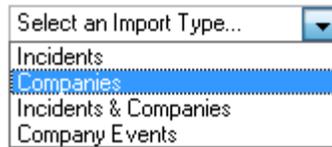
City is the city of the incident.

Event, Event Timestamp, Event Date and Event Time are all used for a particular RMS system.

-IGNORE- is an instruction to ignore the contents of a column of data. If the column doesn't exist simply leave the column blank in **StatsFD**.

Selecting a CAD Import Type

Both the ODBC connection and the file import loading methods utilize one of four RMS Import Types.



Here's an explanation of each import type:

1. **Incidents** loads the CAD table with RMS data for each incident. This is done rarely since it leaves Apparatus responses empty. The CAD table eventually updates the Incidents table only. If your RMS system tracks the first arriving company it's a good idea to include that data element.
2. The **Companies** import is the most commonly used for importing RMS data. It loads a CAD record for each response of a company to an incident. If you have a building fire, for example, the Companies import would create a unique CAD record for each responding company. The Companies type is used to merge RMS data into **StatsFD** Incidents, Apparatus and Patients tables via the CAD table.
3. Rarely RMS systems organize **Incidents and Companies** data in the same raw data export. **StatsFD** does, however, allow you to import incidents and company data from the same file. The "1st Company" data element (first arriving fire department company) is used to update incidents. The "Company" data element is used to update Apparatus and Patients. Both the "1st Company" and "Company" data elements need to be included in this import type. The "Company" field should always be blank when importing Incident RMS data. The "1st Company" field should always be blank when importing Apparatus and Patient RMS data.
4. If you choose **Company Events** the application will display fields for entering the event codes used for Dispatch, Enroute, Arrival and Available. Company Events loads company data one event at a time. One line of data is used to load the timestamp for each event code. At minimum each line of data includes the "Incident Number", the "Call Timestamp" the "Company" involved, the "Event" (event code) and the "Event Timestamp". **StatsFD** assembles CAD records from the events. This system is used by the **Intergraph** CAD system. "Event" and "Event Timestamp" are used in Company Events only.

Other RMS Requirements\

The export needs to identify the SAME INCIDENT NUMBER the fire department uses to track the response in NFIRS 5 as well as the DATE and TIME the incident occurred.

Here's a list of fields you will want to consider for your manual import, automatic

import or ODBC connection.

Example Fields for the Export

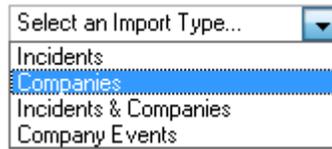
Incident Number (Must be the incident number that's used in NFIRS 5 data)
Time of Call Stamp (If stamp is not available use two fields, Date of Call and Time of Call)
Station Assignment or District where the incident took place
Fire Department Apparatus ID
Time of Dispatch Stamp (If stamp is not available, Date of Dispatch and Time of Dispatch)
Enroute Time Stamp (If stamp is not available, Date of Company Enroute and Time Enroute)
On Scene Time Stamp (If stamp is not available, Date On Scene and Time On Scene)
Unit Clear Time Stamp (If stamp is not available, Date Clear and Time Clear)
Number of Responders on Apparatus (optional)
Address of the Incident
City of the Incident
Zip of the Incident
Type of Call (if available)
Map Page (optional)
Fire Demand Zone (optional)
Longitude (optional)
Latitude (optional)

3.3 Manual Importing

Manual Importing Option

Manual importing locates and loads text data exported from your RMS system. Begin by organizing exported RMS data so it can be viewed in a spreadsheet program like Microsoft Excel. Each row in the spreadsheet defines a response by one apparatus to one incident. Each column in the spreadsheet defines a CAD table data element like, "Incident No.", "Exposure No.", "Date of Call", "Time of Call", etc. Using this approach you would have as many "rows" of data as you have apparatus responses. You would have as many "columns" of data as you have CAD data elements you are tracking.

Prepare to load CAD data by pressing the Channels button. Then click on the "CAD Fields" tab. Select the type of CAD data you wish to load. In most cases, if a "row" of data is equal to the response of one apparatus to one incident, you will select "Companies".

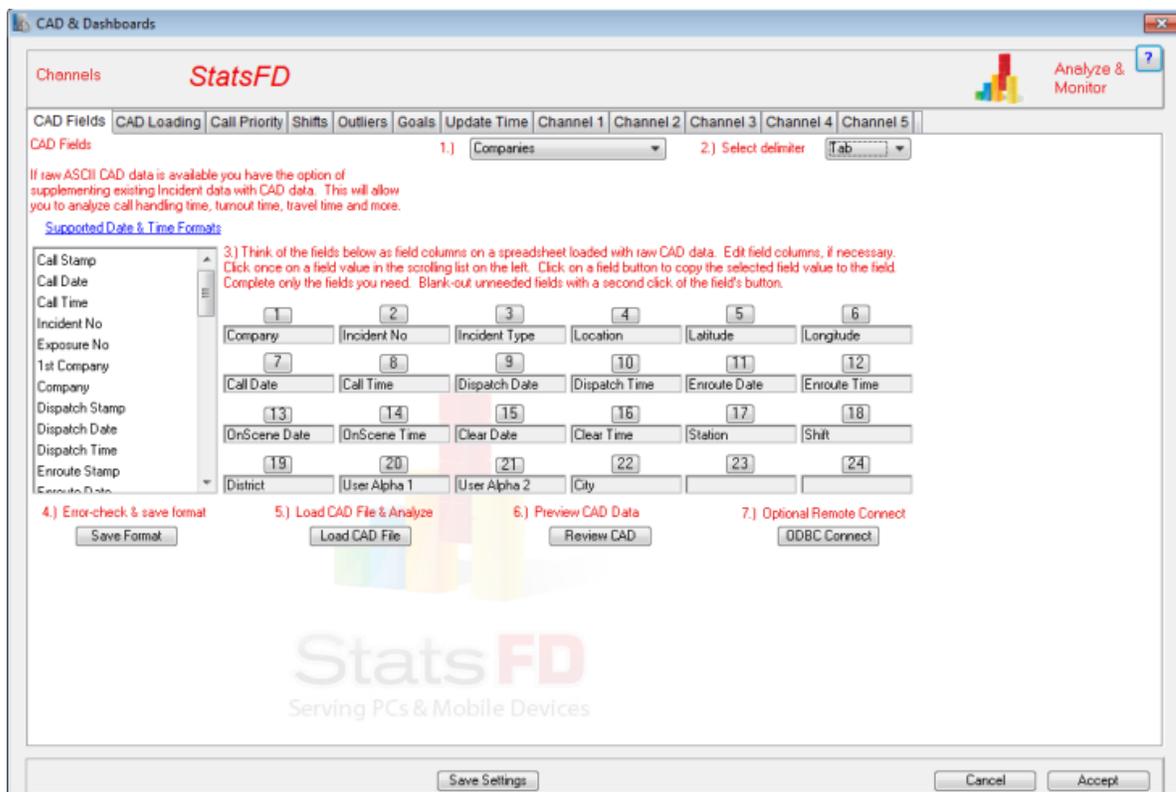


Each field should be separated by a tab character. A carriage return / line feed character should be used to mark the end of each record. Null values are allowed if data is not available. Tabs should be used to hold data field placement.

Field order is not critical but the field order you select in the "CAD Fields" tab should reflect the field order of the RMS data you are importing.

Excel spreadsheet files will work. All you need to do is to configure the export in Excel and save your Excel data as tab-delimited text. Do not attempt to import Excel files in XLS format.

Set-up your import fields. **StatsFD** displays a scrolling list of potential CAD fields. If you click on a field once you will select it. You can relate the selected field to a column by pressing the button on top of the field column. For example, to relate "Company" to the first column click once on "Company" in the scrolling list then press the "1" button above the column field. Repeat this procedure until all useful CAD data fields have been related to a spreadsheet column.



Each loading format must include the Incident No field. If your CAD system tracks exposures, make sure you include an "Exposure No" column. Exposures are normally entered with a value of "000". Additional exposures igniting from exposure "000" are number "001", "002" and so on.

Remember, the "Incidents" import type should use the "1st Company" field when relating information about the first company on the scene. The "Company" field should be used for the "Companies" import type.

If "Latitudes" and "Longitudes" are available in your RMS system it's a good idea to include these data element in your loading format. While many locations can be plotted from address information alone, latitudes / longitudes are far more reliable.

StatsFD also includes the option of importing "user" fields. User fields are simply additional items of CAD data not normally tracked in **StatsFD**. For example, if you have a method of tracking how the CAD call was received you can capture that extra data element in **StatsFD** and create graphs and numeric displays incorporating the extra data element.

User number fields are used for numeric information. If your numeric data element has a decimal use a real field. If you simply have text and/or numbers use an alpha field.

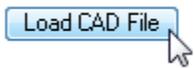
Once the field format has been determined press the "Save Format" button to save the format for the selected import type. The format will be checked for errors when you save it.

Prepare your spreadsheet data file. The columns of text in the spreadsheet file must match the columns of text selected in **StatsFD**. Remember, although the file may have been reviewed and edited in spreadsheet software, it must be saved as an ASCII text file.

Save that CAD text file anywhere you wish. Just remember where you saved it.

Press the "Load CAD File" button.

5.) Load CAD File & Analyze



Load CAD File

Using the standard Windows folder navigation box locate the tab (or comma) delimited ASCII text file you just saved. Double-click on the file name to load it. **StatsFD** will examine the CAD file and may ask you for the two-letter abbreviation for your state and/or the FDID number of the fire department RMS data file being imported.

Here's how the loading works. **StatsFD** looks at the text file and loads field data based on the order you defined in the field columns. Each data element is placed in a special CAD table. This allows you to review CAD data for accuracy before merging it into your NFIRS 5 data.

The CAD table is used to review only CAD records about to be merged with NFIRS 5 data. Whether you decide to merge the CAD data or decide to cancel the record merge the records in the CAD table are deleted. This allows you to review only the CAD records about to be merged into NFIRS 5 data.

After **StatsFD** has loaded your CAD records press the "Review CAD" button to see the loaded records displayed in a temporary CAD table. The CAD table works just like any other **StatsFD** table. You can double-click on a listed CAD record to see complete information about the CAD record.

Double-click on several CAD records to make sure the information in the CAD record is accurate. When you are satisfied the CAD record reflects the accurate information you want to merged into existing NFIRS 5 records press the "Merge Data" button.

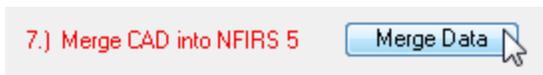
If the CAD records are inaccurate try pressing the "Correct" button. The button will bring-up a dialog which allows you to select one or more corrective measures.

Select one or more options to modify the CAD records now in selection. Use this area to modify CAD import data that does not exactly match existing NFIRS 5 incident data.

- Shorten Incident Number by removing this number of characters from the right
- Shorten Incident Number by removing this number of characters from the left
- Translate Vehicle AKA's to Vehicle ID Vehicle AKA's are entered in the Vehicles area under the Jurisdiction button.
- Translate Station AKA's to Station ID Station AKA's are entered in the Stations area under the Jurisdiction button.
- Translate District AKA's to District ID District AKA's are entered in the Districts area under the Jurisdiction button.
- Remove extra space characters within Location field

Try running one or more "correct" procedures. If the data is still not correct then cancel the CAD data load. The inaccurate CAD records are automatically deleted.

If the CAD data is correct then press the button to merge CAD data.



Once CAD data has been merged you can review it in Incidents, Apparatus and Patients as applicable. When you double-click to open any of these records you will see an enable "CAD" button at the top of the display. Press the "CAD" button to review CAD data loaded into the incident, apparatus or patient record.

You may now create reports with information about Call Handling Time, Turnout Time, Travel Time and more. These times are essential for NFPA 1710 / 1720 analysis.

There is no harm reloading CAD data. If the data already exists it will simply be rewritten.

3.4 Automatic Importing

Setting-up Automatic File Importing

Automatic reporting is a legacy feature that should only be used if you have been successfully performing RMS data files and would like to automate the process. The

new automatic ODBC connection option is easier to setup and maintain.

Automatic file importing requires settings in two applications. Your RMS system must be set to periodically export record files into a folder you designate. The folder may be local or somewhere on your network. **StatsFD** must be configured to periodically check the same folder for new records to import.

Frequently RMS applications can be configured to perform the required export using a "query" file. Animated Data, Inc. has query files and instructions so check with us about availability for your RMS system. RMS systems can also be configured to export files by setting-up a "Crystal Reports" script to periodically query the RMS system and create the required files. Before setting-up this process you should confirm that the files created by your RMS system import directly into **StatsFD** without having to be processed through Excel. You should also confirm the files are being reliably delivered to the folder you designate.

Here's how to setup automatic file importing in **StatsFD**.

At the Operations window press the "Channels" button. In the "CAD Fields" tab select the "Import Type" you have been using from the #1 drop down list. If this is a new configuration start by selecting "Companies" or use the setting provided by Animated Data, Inc. Now press the "CAD Loading" tab.

In the first drop down list select the "Auto Import via CAD Folder" option. In the second drop down list select the same CAD Import type you selected under the CAD Fields tab.

Setup and test the path to a local CAD folder. This should be the same folder that is receiving CAD files from your RMS system.

If CAD files are being placed into a remote folder setup access to that folder via an FTP connection.

Other Channel Settings

These instructions are covered in more detail in [Chapter 5](#) and [Chapter 6](#).

Make sure your Call Priority settings are OK under the "Call Priority" tab. If you identify call priority in a user defined field select the field name being used then enter values that represent emergency responses. If you are not importing a call priority field the best setting for you is to select the Incident Types field and designate all Fires & EMS incident types as emergencies. Other incident types will be treated as non-emergencies. In **StatsFD** the "@" symbol is a wildcard so if you enter Incident Types as the field and then "1@" and "3@" that will set all incident types beginning with a 1 or a 3 as emergencies. Remember, if you have no setting no incidents will be identified as emergencies. This means that you will get totals for demand activity,

but emergency performance will be all zeros.

Press the “Shifts” tab. If the data you are importing includes the shift on duty at the time of the incident you do not have to activate calculations. If you decide to activate shift calculations make sure the calculations tests OK.

Confirm your “Outliers” and “Goals” under the next two tabs of the same name.

Under the “Update Time” enter the time of day you wish the system to recalculate your daily demand and performance numbers. Generally this time is 15-minutes before the first shift change each day.

Check each of the 5-Channel tabs to make sure the information is OK. You must have at least one active channel.

Publishing Settings

Select “Setup” under the Publishing button. If you are going to send email reports make sure your email address is valid and you can send emails from **StatsFD** using the test button. Confirm the times you have entered under the “Schedule” tab.

You may confirm dashboard configurations under the three “Dashboard” tabs.

Go to the “Sync” tab. If you do not have other **StatsFD** applications installed on your network select “Off” under Automatic Sync in the upper left. If you wish to Sync manually select “Manual Master”.

If you wish to set up automatic syncing select “Automatic Master”. Make sure the path to the Sync Folder tests OK. Also, make sure you select the tables you wish to export into the Sync folder.

If this is a remote installation of **StatsFD** make sure you select “Remote”. This selection is used for importing data into **StatsFD** applications located out on the network.

Now press the “Publishing” tab. Press the “Test Publisher” button to test your settings. If they test OK press the “Start Publisher” button to start the publishing process. Observe the process through several cycles pressing the “Refresh” button periodically to see details about the tasks being performed. If everything looks like it’s working OK press the “End Publisher” button. Wait about 1-minute for the publisher to cycle through any tasks it may be performing. Press the “Refresh” button until you see confirmation that the Publishing process has stopped.

Once you have tested and successfully ended the publishing process put a check mark in the “Enable Automatic Publishing at Startup” checkbox.

Press "Accept" to save your settings and leave the Publishing button area.

Quit **StatsFD** and restart. The Publishing process will start automatically.

Remember, you have your choice of automatic reports under the Publishing button including:

1. Mobile Reports
2. Mobile Scripts
3. Fast Alerts

Make sure you setup the reports you want in these areas.

3.5 Automatic ODBC

Automatic ODBC Data Connection

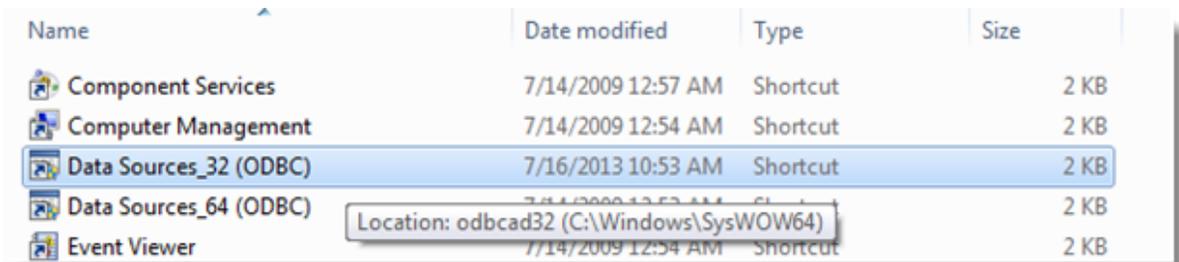
Overview

StatsFD now offers an ODBC connection to any SQL server data source. ODBC is an acronym for Open Database Connection. The ODBC connection is made through a source called a DSN or Data Source Name. All contemporary Windows versions allow you to create a DSN for connecting to SQL server.

StatsFD uses two types of DSN connections; 1.) System DSN or 2.) User DSN. It is easier to use a System DSN because it allows access to the SQL ODBC drivers no matter who is logged-on. A User DSN is specific to each user and allows you to restrict which user has access.

Chances are there is a READ ONLY DSN already available. If you have been using **Crystal Reports** you may have an existing System or User DSN connection. Simply use that connection for **StatsFD** too.

If there is no DSN available have your IT department create a READ ONLY ODBC connection to the SQL server that powers your RMS system. If you are making the connection on a 64-bit PC use the 32-bit ODBC executable to create the DSN.



While working with IT, ask them for the name of your RMS system database. This is generally the name that appears in the SQL Server Management Studio application.

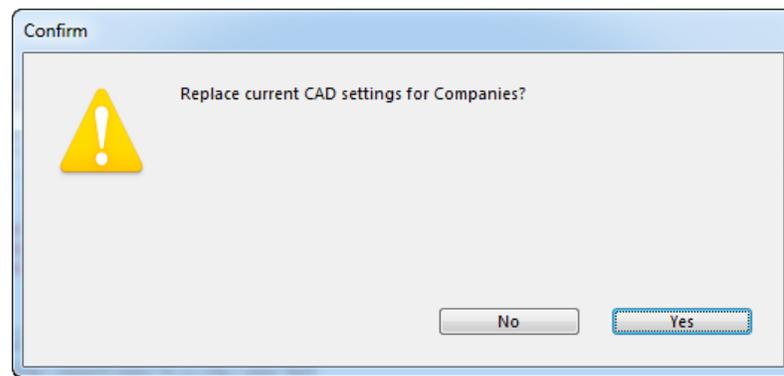
Setting-up Automatic ODBC Record Loading

Here's how to configure **StatsFD** to connect to your Records Management System (RMS).

At the Operations window press the "Channels" button. In the "CAD Fields" tab select the "Import Type" you have been using from the #1 drop down list. If this is a new configuration start by selecting "Companies" or use the setting provided by Animated Data, Inc. Now press the "ODBC Connect" button in #7.

Check with Animated Data, Inc. for the availability of ODBC setting text for your RMS system. If you have been given settings text copy all the text into your clipboard. Be sure to include both the numbers at the top and all the fields below. Press the "Export and Import Settings" tab and press the "Paste from Clipboard" button. You should see the settings load at the bottom of the screen. Now press the "Load Settings" button to load the settings.

If you have been using **StatsFD** for automatic data loading and you wish to preserve the field order for your imports answer "No" to the dialog that appears below:

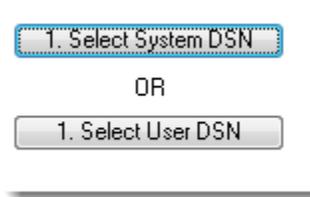


If you answer "No" your CAD field order will be preserved and you will be responsible for selecting the correct SQL tables and fields for the CAD fields you have selected.

If you answer "Yes" your CAD field selection will be re-written in order to conform to the SQL tables and fields being imported.

If the setting load is successful press the "Save Settings" button at the bottom of the page. If you click on the "Field Map 1 – 12" tab you should see entries in the field area. If not, repeat the process making sure you load all of the settings text.

Whether or not you have loaded your settings press the “Remote Database” tab. Press the “1. Select System DSN” or “1. Select User DSN” button and select the DSN for your RMS system from the list that appears.



Once selected the name of the DSN should appear below the buttons on the left side. If your DSN requires a User Name or Password enter those in the field provided. Enter the Database name in the area provided below.

Note: The DSN name, User Name, Password and Database Name are likely unique for your installation. Default entries that may have been loaded are not to be considered valid for your local installation.

Once all information has been entered press the “Test Access” button to see if you can successfully log-on to the SQL server through the selected DSN. If you can log-on proceed to the next step. Otherwise, research the DSN Name, User Name, Password and Database Name until you have a combination that allows you to connect to your SQL database successfully.

If you encounter any crashing or repeated error messages try quitting StatsFD and restart the application by right-clicking on the short-cut and selecting “Run as Administrator...”. The error messages may be caused by local security settings that kill the **StatsFD** application as it tries to access your SQL data share.

Tables & Linking Fields

Let’s continue with the setup. Press the “Tables & Linking Fields” tab. If this area is already set-up chances are there’s nothing more to do. But here’s an explanation of what is going on.

Tables are lists of related data elements. For example, the table named “Incident_unit” may be used to track data elements related to the apparatus responding to an incident. Since we are interested in just this type of information the name of this table should be entered as the “Default Table”.

Related to the “Incident_unit” table is a table that tracks a collection of data elements related to the incident itself. Enter the name of that table in “Related Table 1”. Now you need to locate the “connecting field” that generally has the same name and holds the same information in both tables. This field might be an “IncidentNumber” or “Incidentkey” field. Enter the field in the default table into the “Connecting Field –

Default Table” area. Enter the field reference in the related table. Generally one table relationship is enough, but you may enter a second relationship between the default table and another table if you wish.

Field Mapping

StatsFD allows you to import up to 24 fields via ODBC. Press the “Field Map 1-12” tab to see how this works.

Here we see individual areas for setting-up and testing the connection between **StatsFD** and the RMS system. “Connect to” refers to the **StatsFD** CAD table where data will be imported. “Table Name” refers to the name of the table in the RMS system that stores the data to be loaded into the **StatsFD** CAD table. “Field Name” refers to the name of the field in the RMS system that stores the data. The “Field Type” refers to the format of the field like text, date or time.

The "Connect to" field has already been determined when you selected your CAD fields. You need to enter the corresponding “Table Name”, “Field Name” and “Field Type” and then press the number button on the top of the field to test to see in the data is returned from the RMS system.

Since this test only returns a value from a single record, the value could be blank for the select record. The main value of testing is to see if an error is generated. If you get an error adjust your entries until it tests OK.

Repeat the process for all fields that have a “Connect to” title. Leave the other fields blank.

SQL Record Selection & Script

Press the “SQL Record Selection & Script” tab. The “Enter MAX number of records...” field used to make sure the database always returns a limited number of records. We do not want to have it return all records in the database in a single import. If your CAD system generates 100 Apparatus response records per day the number in this field should be a bit higher than that number times the number of days of CAD data you import.

The “Enter the number of days...” field is used to specify the number of days of records you wish to import during each CAD data import cycle. Each CAD record is intended to be imported several times as this allows any record updates to be moved into StatsFD.

The “Enter the Dispatch Date...” field tracks the name of the field for the Dispatch Date. This date is used when searching for records using the number of days entered above.

If the SQL Query field is blank press the “3. Build SQL Query” button to create an SQL Query from the table and field information you have entered.

SQL Testing Area

Press the “SQL Testing Area” tab. Press the “4. Test SQL” button to import values into each of the fields with a “Connect to” label. Check the import to make sure the right data is in each field. You can press the “Clear Arrays” field to clear the import and test again.

You may also check individual fields by pressing the numbered button on top of each field. Be sure to clear the arrays after each import. Make sure all fields work OK before moving on to the next step.

Export & Import Settings

Press the “Export & Import Settings” tab. Press the “5. Review Data” button. This button queries the SQL database and displays the data returned in **StatsFD’s** CAD table. Scroll through the records and make sure they are complete. If they look complete cancel out of the area. You have setup ODBC importing properly.

If you have already loaded NFIRS 5 data that does not have related CAD data in it you may merge CAD data into the NFIRS 5 data now.

Select a one month period for testing. Enter a Begin Date and an End Date. Press the “Import Data” button. You will see the CAD data displayed in **StatsFD’s** CAD table.

If you are going to import CAD data for multiple time periods check the “No Recalc” check box. This will save a great deal of time since newly imported records will not be recalculated. Make sure, however, you uncheck the “No Recalc” check box when importing your last set of CAD data.

Press the “Merge Data” button to merge newly imported CAD data into your imported NFIRS 5 incident data.

When you have setup ODBC and successfully imported and merge CAD data for all of your historical NFIRS 5 data you are ready to go live.

Going Live with the StatsFD ODBC Import

StatsFD can be set to operate 24 / 7 importing new CAD data and processing reports that are created on a schedule you select. Once the ODBC connection has

been entered and tested it's time to go live.

Channel Settings

More details on Channel Settings may be found in [Chapter 5](#). Start with a system check.

At the Operations Window press the "Channels" button. Select the Import Type you wish to use in #1. Press the "CAD Loading" tab. Select "Auto Import via ODBC Connection" in the first drop down list. Select your CAD import type in the second drop down list.

Make sure your Call Priority settings are OK under the "Call Priority" tab. If you identify call priority in a user defined field select the field name being used then enter values that represent emergency responses. If you are not importing a call priority field the best setting for you is to select the Incident Types field and designate all Fires & EMS incident types as emergencies. Other incident types will be treated as non-emergencies. In StatsFD the "@" symbol is a wildcard so if you enter Incident Types as the field and then "1@" and "3@" that will set all incident types beginning with a 1 or a 3 as emergencies. Remember, if you have no setting no incidents will be identified as emergencies. This means that you will get totals for demand activity, but emergency performance will be all zeros.

Press the "Shifts" tab. If the data you are importing includes the shift on duty at the time of the incident you do not have to activate calculations. If you decide to activate shift calculations make sure the calculations tests OK.

Confirm your "Outliers" and "Goals" under the next two tabs of the same name.

Under the "Update Time" enter the time of day you wish the system to recalculate your daily demand and performance numbers. Generally this time is 15-minutes before the first shift change each day.

Check each of the 5-Channel tabs to make sure the information is OK. You must have at least one active channel.

Publishing Settings

Select "Setup" under the Publishing button. More detailed information about publishing setup may be found in [Chapter 6](#).

If you are going to send email reports make sure your email address is valid and you can send emails from StatsFD using the test button.

Confirm the times you have entered under the "Schedule" tab.

You may confirm dashboard configurations under the three “Dashboard” tabs.

Go to the “Sync” tab. If you do not have other **StatsFD** applications installed on your network select “Off” under Automatic Sync in the upper left. If you wish to Sync manually select “Manual Master”.

If you wish to set up automatic syncing select “Automatic Master”. Make sure the path to the Sync Folder tests OK. Also, make sure you select the tables you wish to export into the Sync folder.

If this is a remote installation of **StatsFD** make sure you select “Remote”. This selection is used for importing data into **StatsFD** applications located out on the network.

Now press the “Publishing” tab. Press the “Test Publisher” button to test your settings. If they test OK press the “Start Publisher” button to start the publishing process. Observe the process through several cycles pressing the “Refresh” button periodically to see details about the tasks being performed. If everything looks like it’s working OK press the “End Publisher” button. Wait about 1-minute for the publisher to cycle through any tasks it may be performing. Press the “Refresh” button until you see confirmation that the Publishing process has stopped.

Once you have tested and successfully ended the publishing process put a check mark in the “Enable Automatic Publishing at Startup” checkbox.

Press "Accept" to save your settings and leave the Publishing button area.

Quit **StatsFD** and restart. The Publishing process will start automatically.

Remember, you have your choice of automatic reports under the Publishing button including:

1. Mobile Reports
2. Mobile Scripts
3. Fast Alerts

Make sure you setup the reports you want in these areas.

4 4. Analyze

4.



- * [Run the Time Analyzer](#)
- * [Run the Worksheet Analyzer](#)
- * [Perform GIS Analysis](#)
- * [Monitor Staffing Strain](#)
- * [Analyze Aid Patterns](#)
- * [Locate Simultaneous Incidents](#)
- * [Create a Jurisdictional Profile](#)
- * [Committed Analyzer](#)
- * [Out of Area Analyzer](#)
- * [Locate ERF Incidents](#)
- * [Benchmarks & Baselines](#)
- * [Setup Risk Analysis](#)

4.1 Run the Time Analyzer

Time Analyzer Overview

The Time Analyzer is used to measure fire department operations related to time. Here are the types of measurements available in the Time Analyzer:

1. **Call Processing / Call Handling Time** (The time it takes the dispatcher to receive, process and dispatch ("tone-out") appropriate companies.) -CAD Data Required-
2. **Turnout Time** (The time measured from dispatch until the company begins traveling to the scene.) -CAD Data Required-
3. **Travel Time** (The time it takes companies to travel from their location at dispatch to the scene of the emergency.) -CAD Data Required-
4. **Dispatch to Arrival** (The time from a company being notified of the location of an emergency until the company arrives on the scene.)
5. **Call to 1st Arrival** (The time that passes from the time the dispatch center receives a call for assistance until the first company arrives on the scene.)
6. **Call to 2nd Arrival** (The time that passes from the time the dispatch center receives a call for assistance until the second company arrives on the scene.)
7. **Call to ERF Apparatus Arrival** (The time that passes from the time the dispatch center receives a call for assistance until the ERF arrives on the scene.)
8. **ERF Apparatus Travel Time** (The travel time of the last ERF apparatus to arrive on the scene.)
9. **Call to ERF plus 1 Arrival** (The time that passes from the time the dispatch center receives a call for assistance until the ERF plus one additional apparatus arrives on the scene.)
10. **Call to ERF F/f Count Arrival** (The time that passes from the time the dispatch center receives a call for assistance until the ERF as determined by fire fighter count arrives on the scene.)
11. **Call to ERF F/f Travel** (The travel time of the last apparatus to arrive on the scene to complete the ERF by F/f count.)
12. **Call to ERF - Low F/f Arrival** (The time that passes from the time the dispatch center receives a call for assistance until ERF low F/f count arrives on the scene.)
13. **Call to ERF - High F/f Arrival** (The time that passes from the time the dispatch center receives a call for assistance until ERF high F/f count arrives on the scene.)
14. **Scene Duration** (The amount of time it takes to handle the emergency from the time the company arrives on the scene until the company is clear.)
15. **Total Duration** (The time that passes from the time the dispatch center receives a

call for assistance until the company is clear.)

One type of fractile analysis is called "Compliance" testing. "Compliance" requires the fire department to create a goal. Compliance determines the percentage of incidents meeting the goal.

Here's an example. Let's take the goal of having the first apparatus arrive on the scene in 6 minutes or less. A compliance report can look at a 24-hour day and within each hourly segment plot the percentage of incidents meeting that goal from 0% to 100%.

Both fractile analysis and compliance testing are types of measurements used by NFPA 1710 and NFPA 1720 to describe standards for fire department responses. Here's how **StatsFD** performs these measurements.

The user simply enters a begin time, an end time and an "interval". For example, if you wish to examine response time you can enter a begin time of 0 minutes and an end time of 8 minutes. You can then choose to see response time criteria displayed in intervals down to 15 seconds. The Time Analyzer will then tell you the number and percentage of responses that had a response time equal to 00:00, a response time less than or equal to 00:15, a response time less than or equal to 00:30, a response time less than or equal to 00:45, etc.

As the Time Analyzer increments the amount of time you see the number and percentage of responses grow. This provides a dynamic view of the distribution of responses over a defined range of operational criteria.

In addition to these text measurements **StatsFD** also provides easy to access fractile and compliance graphs.

How to Run the Time Analyzer

The Time Analyzer works in Incidents, Apparatus and Patients. Once you select a module you then need to select the records to include in your time analysis. This is a very important step.

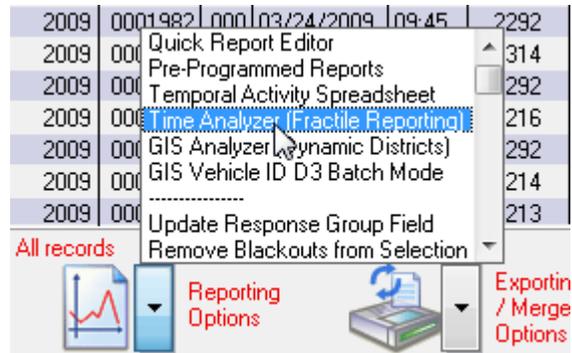
Here's a video that shows you how to create a fractile reports using the Time Analyzer:



Remember, you don't need to look at just all incidents or even incidents between a

specific pair of dates. You can use the Time Analyzer to measure various operational times for all fires, all EMS responses, fire and EMS responses. You create and compare measurements for given time intervals during the day or compare shifts, stations, districts or individual companies. You can also create reports by Incident Type and Property Type. The Time Analyzer is powerful tool.

You can select the time analyzer from the report selection bar in Incidents, Apparatus and Patients.

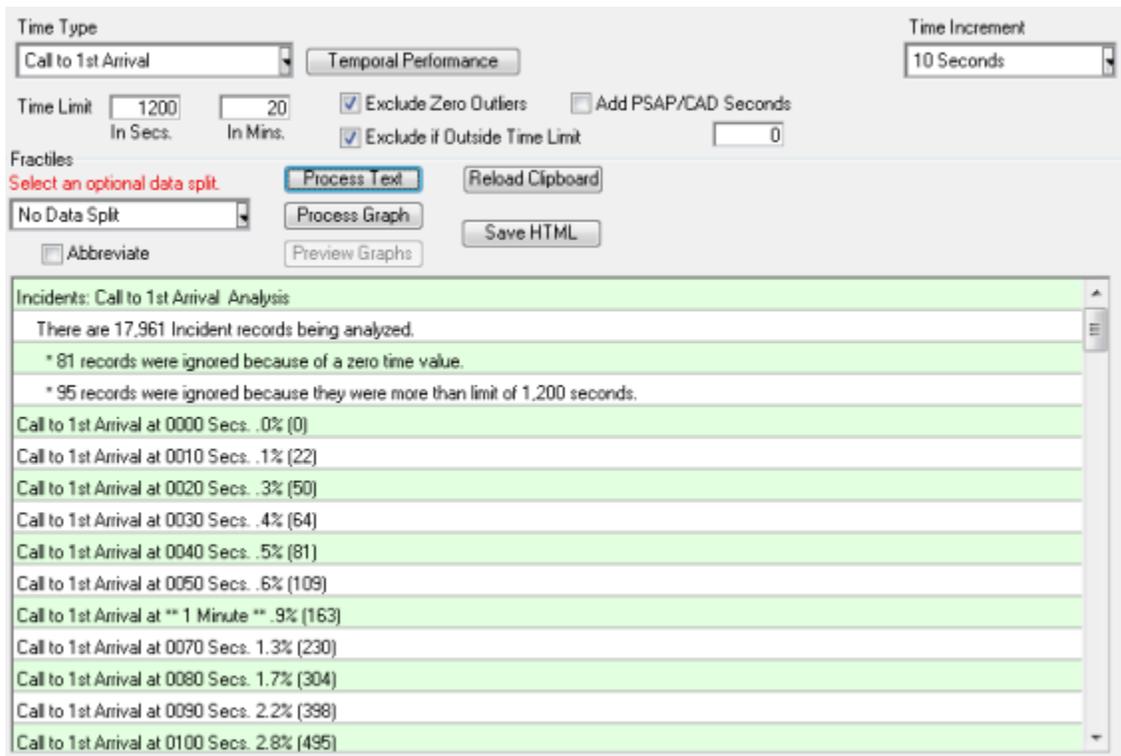


Alternatively, you can click the report icon in the lower left. When the report selection dialog appears click on the "Time Analyzer" button in the upper-right area of the screen.

When the Time Analyzer opens it opens on the "Fractile Splits" page. Buttons for navigating from page to page may be found near the bottom of the Time Analyzer layout.

Let's work with a specific example. Call to 1st Arrival (Distribution) is being measured from 0 to 20 minutes (1,200 seconds) in 10 second intervals. Once you have entered the required parameters, press the Process button to create and populate the criteria you selected.

Here 17,961 incidents are ranked by 10-second segments. This report was processed in just a few seconds. Notice 81 records had a zero second Call to 1st Arrival and were ignored. Also ignored were 95 records indicating Call to 1st Arrival times greater than 1,200 seconds. If 911 calls are received by another agency the application provides the ability to add PSAP CAD seconds. Once options have been set simply press the "Process Text" button to perform the calculation.



The above calculations are for all incidents. But a new "Data Splits" feature (upper left side of layout) allows comparative calculations by scores of criteria. Here's essentially the same set of records split by Station for Stations 1, 2 & 3.

Time Type: Call to 1st Arrival | Temporal Performance | Time Increment: 10 Seconds

Time Limit: 1200 In Secs. | 20 In Mins. | Exclude Zero Outliers | Add PSAP/CAD Seconds
 Exclude if Outside Time Limit | 0

Fractiles: Select an optional data split. | Process Text | Reload Clipboard
 by Station | Process Graph | Save HTML
 Abbreviate | Preview Graphs

Incidents: Call to 1st Arrival Analysis - by Station
 There are 17,878 Incident records being analyzed.
 * 80 records were ignored because of a zero time value.
 * 86 records were ignored because they were more than limit of 1,200 seconds.

	1	2	3
Call to 1st Arrival at 0000 Secs.	.0% (0)	.0% (0)	.0% (0)
Call to 1st Arrival at 0010 Secs.	.1% (8)	.0% (1)	.2% (13)
Call to 1st Arrival at 0020 Secs.	.3% (22)	.1% (3)	.4% (24)
Call to 1st Arrival at 0030 Secs.	.3% (28)	.2% (5)	.4% (29)
Call to 1st Arrival at 0040 Secs.	.5% (37)	.2% (7)	.5% (35)
Call to 1st Arrival at 0050 Secs.	.7% (54)	.4% (11)	.6% (40)
Call to 1st Arrival at ** 1 Minute **	1.0% (79)	.8% (24)	.8% (56)
Call to 1st Arrival at 0070 Secs.	1.5% (117)	1.1% (34)	1.1% (74)
Call to 1st Arrival at 0080 Secs.	1.8% (149)	1.6% (48)	1.5% (102)
Call to 1st Arrival at 0090 Secs.	2.4% (194)	2.1% (62)	2.1% (137)

Because there's virtually no limit to the number of columns created by a data split the normal way to view a data split is via a spreadsheet application like Excel. Once you run the calculation the clipboard is automatically filled with spreadsheet data. Simply paste this data into cell A1 and you will see the data perfectly formatted for viewing in the spreadsheet.

But there's another way to view data splits. Press the "Save HTML" button and an HTML table will be built to display the data. Press the "Open HTML" button to open the HTML table you created in your default web browser. Here's a sample of the HTML created in the Time Analyzer:

Incidents: Call to 1st Arrival Analysis - by Station

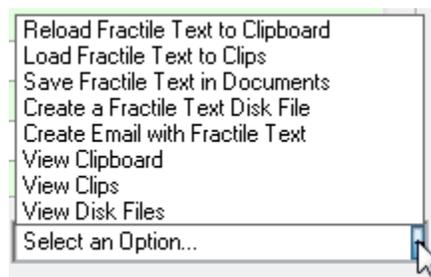
There are 17,878 Incident records being analyzed.

* 80 records were ignored because of a zero time value.

* 86 records were ignored because they were more than limit of 1,200 seconds.

Time Increment	1	2	3
Call to 1st Arrival at 0000 Secs.	.0% (0)	.0% (0)	.0% (0)
Call to 1st Arrival at 0010 Secs.	.1% (8)	.0% (1)	.2% (13)
Call to 1st Arrival at 0020 Secs.	.3% (22)	.1% (3)	.4% (24)
Call to 1st Arrival at 0030 Secs.	.3% (28)	.2% (5)	.4% (29)
Call to 1st Arrival at 0040 Secs.	.5% (37)	.2% (7)	.5% (35)
Call to 1st Arrival at 0050 Secs.	.7% (54)	.4% (11)	.6% (40)
Call to 1st Arrival at ** 1 Minute **	1.0% (79)	.8% (24)	.8% (56)
Call to 1st Arrival at 0070 Secs.	1.5% (117)	1.1% (34)	1.1% (74)
Call to 1st Arrival at 0080 Secs.	1.8% (149)	1.6% (48)	1.5% (102)
Call to 1st Arrival at 0090 Secs.	2.4% (194)	2.1% (62)	2.1% (137)
Call to 1st Arrival at 0100 Secs.	3.1% (250)	2.6% (77)	2.4% (162)
Call to 1st Arrival at 0110 Secs.	4.0% (321)	3.4% (101)	3.1% (206)
Call to 1st Arrival at ** 2 Minutes **	5.2% (418)	4.2% (127)	3.9% (260)
Call to 1st Arrival at 0130 Secs.	6.6% (531)	5.5% (164)	4.7% (312)

Once a Time Analysis has been processed **StatsFD** allows you several other options for your Time Analysis report. Using the "Select an Option" pop-up list you can:



1. Reload fractile text to the clipboard.

2. Load fractile text into Clips.
3. Save the time text in the Documents module for later use.
4. Create a text file containing time text.
5. Create an email with the time text inserted in the body of the email.

You can quickly map fractile performance data by D3 District. Simply press the "Plot Type Type to D3 Map" button to send performance data to a KML file capable of being read by Google Earth or other KML enabled GIS systems.

StatsFD now includes a sophisticated deployment compliance report designed to measure NFPA 1710 calculations in one fast and simple operation.

A rectangular button with rounded corners and a light gray gradient, containing the text "1710 Compliance" in a dark gray font.

NFIRS 5 transaction data does not distinguish between the time a call for assistance is received and the time the fire department is first notified. This makes measuring call processing time impossible. Further, NFIRS 5 transactions fail to communicate the time an apparatus begins its response to an emergency. This makes it impossible to measure turnout time and travel time.

Therefore, before running the 1710 Compliance summary you should already have imported CAD data containing this information.

You may not have to secure raw CAD data to secure the missing time field data. If "Call Time" and "Enroute Time" is present in your RMS system you may create a standard ASCII (text) export from your RMS system and feed it into **StatsFD**. Each row should represent the response of one apparatus to an incident. Use a separate row for each apparatus response. Include the following field columns; Incident Number, Call Received Date, Call Received Time, Dispatch Date, Dispatch Time, Enroute Date, Enroute Time. Set-up your CAD import and the required fields will be merged into your existing Incident and Apparatus records.

Once the required CAD data is on board simply press the NFPA 1710 Summary button to generate a report.

While "distribution" (first apparatus arrivals) is easy to measure "concentration" (the arrival of subsequent apparatus) has always been more difficult. Now **StatsFD** introduces a new tool for measuring concentration. Here's how it works.

Every arrival of an apparatus on an incident triggers one of two events:

1. A crew of fire fighters is established
2. A crew of fire fighters is upgraded

If an incident consists of one engine with 3-F/f's there is a single crew assembly event. However, if an incident consists of 3 3-firefighter engines and 1 4-firefighter

truck there are 4 crew assembly events:

1. A 3 F/f crew event occurs when the 1st engine arrives
2. A 6 F/f crew event occurs when the 2nd engine arrives
3. A 10 F/f crew event occurs when the truck arrives
4. A 13 F/f crew event occurs when the 3rd engine arrives

These crew assembly events can be broken-down into fractiles allowing us to compare performance by team size. That's what the "Effective Force Analyzer" measures.

The output of the Effective Force Analyzer is a large Excel spreadsheet. When calculated from Incidents the Effective Force Analyzer provides a fractile breakdown by crew size at time intervals down to 1-second. But the tool can also be run on a selection of apparatus records. This allows selection of apparatus by type and provides the ability to calculate the number of seconds to 90% compliance for each crew size. In addition the "Data Splits" can be applied to Effective Force calculations made from the Apparatus module.

The Effective Force Button

If you enter the Time Analyzer from the Incidents list view the Effective Force button will perform an Effective Force analysis for the time limit you select.

- Performance is measured over progressive time segments by progressive crew size.
- Crew sizes from 1 to 25 are analyzed.
- Summaries provide incident counts and seconds to 90% compliance.
- Data splits are not supported

Here's how the setup screen will look:

Time Type: Select a Time Type (dropdown) | Time Increment: 10 Seconds (dropdown)

Time Limit: 1800 In Secs. | 30 In Mins. | Exclude Zero Outliers | Exclude if Outside Time Limit

Fractiles: Select an optional data split. | Abbreviate

Buttons: Process Text, Reload Clipboard, Process Graph, Save HTML, Open HTML, Preview Graphs

Apparatus: Call to Arrival Performance Analysis

There are 22,039 Apparatus records being analyzed.

* 60 records were ignored because of a zero time value.

* 68 records were ignored because they were more than limit of 1,800 seconds.

	01 F/f Team	02 F/f Team	03 F/f Team	04 F/f Team	05 F/f Team	06 F/f Team	07 F/f Team
Call to Arrival at 0000 Secs.	.0% (0)	.0% (0)	.0% (0)	.0% (0)	.0% (0)	.0% (0)	.0% (0)
Call to Arrival at 0010 Secs.	.0% (0)	.0% (0)	.0% (0)	.1% (3)	.1% (1)	.0% (2)	.0% (0)
Call to Arrival at 0020 Secs.	.0% (0)	.1% (5)	.4% (1)	.2% (10)	.1% (1)	.1% (6)	.0% (0)
Call to Arrival at 0030 Secs.	.6% (1)	.1% (7)	.4% (1)	.3% (13)	.1% (1)	.1% (8)	.0% (0)
Call to Arrival at 0040 Secs.	.6% (1)	.1% (9)	.4% (1)	.3% (15)	.1% (1)	.1% (10)	.0% (0)
Call to Arrival at 0050 Secs.	.6% (1)	.2% (11)	.4% (1)	.4% (18)	.2% (2)	.2% (12)	.0% (0)
Call to Arrival at ** 1 Minute **	.6% (1)	.3% (18)	.4% (1)	.6% (27)	.3% (3)	.2% (15)	.0% (0)
Call to Arrival at 0070 Secs.	.6% (1)	.4% (27)	.4% (1)	.7% (32)	.3% (4)	.2% (18)	.0% (0)
Call to Arrival at 0080 Secs.	.6% (1)	.5% (32)	1.8% (4)	.7% (35)	.7% (8)	.3% (22)	.0% (0)
Call to Arrival at 0090 Secs.	.6% (1)	.6% (40)	1.8% (4)	1.0% (46)	1.0% (11)	.4% (26)	.0% (0)

Buttons: 1710 Compliance | **Effective Force Analysis** | Select an Option... (dropdown)

After running the report you will have the option to paste the results into a spreadsheet or press the Save HTML button to save the report into an HTML table.

Press the Open HTML button to open the HTML table in your default web browser.

Effective Force Run From Apparatus Reporting Options Bar

Unlike running the Effective Force calculations from Incidents running the application from Apparatus will allow you to analyze apparatus by apparatus type or, as in this example, by arrival sequence.

From the Apparatus list view select the Apparatus records you wish to include in your report. From the "Report Options" selection bar select the "Time Analyzer".

Here you have a choice of the type of Effective Force analysis you want. If you do not specify a data split the report will resemble the same report created in Incidents.

If you specify a data split each category of the split will be analyzed in a row providing the seconds to 90% for each split category.

- Select "No Data Split" or select a data split.
- If "No Data Split" analysis will execute like an Effective Force Analysis in Incidents
- If a data split is selected analysis will calculate seconds to 90% performance is measured over progressive crew size.
- Any available data splits can be calculated and displayed.
- Crew sizes from 1 to 25 are analyzed.

Here's how the setup screen will look:

The screenshot shows the Time Analyzer software interface. At the top, there are controls for "Time Type" (a dropdown menu), "Time Increment" (set to "10 Seconds"), "Time Limit" (1800 In Secs, 30 In Mins), and checkboxes for "Exclude Zero Outliers" and "Exclude if Outside Time Limit". Below these are "Fractiles" settings, including a dropdown for "by Arrival Sequence" and a checked "Abbreviate" option. There are also buttons for "Process Text", "Reload Clipboard", "Process Graph", "Preview Graphs", and "Save HTML".

The main data area displays the following information:

Apparatus: Call to Arrival Performance Analysis - by F/f Team by Arrival Sequence
 There are 26,113 Apparatus records being analyzed.
 * 100 records were ignored because they were more than limit of 1,800 seconds.

	01 F/f Team	02 F/f Team	03 F/f Team	04 F/f Team	05 F/f Team	06 F/f Team	07 F/f Team
1st Secs (Mins) to 90%	500 (8.33) - 103	360 (6) - 2,401	440 (7.33) - 3,440	450 (7.5) - 4,078	420 (7) - 809	370 (6.16)	
2nd Secs (Mins) to 90%	470 (7.83) - 64	400 (6.66) - 3,944	450 (7.5) - 55	540 (9) - 193	550 (9.16) - 172	530 (8.83)	
3rd Secs (Mins) to 90%	Only 1 Arrivals	570 (9.5) - 10	Only 4 Arrivals	1,480 (24.66) - 58	520 (8.66) - 40	530 (8.83)	
4th Secs (Mins) to 90%	Only 1 Arrivals	800 (13.33) - 5	Only 4 Arrivals	840 (14) - 12	480 (8) - 15	960 (16) -	
5th Secs (Mins) to 90%	Only 1 Arrivals		Only 1 Arrivals	Only 3 Arrivals	Only 2 Arrivals	Only 2 Arrivals	
6th Secs (Mins) to 90%	Only 1 Arrivals		Only 1 Arrivals	Only 1 Arrivals		Only 1 Arrivals	Only 1 Arr
7th Secs (Mins) to 90%							Only 1 Arr
8th Secs (Mins) to 90%							
9th Secs (Mins) to 90%							

At the bottom of the interface, there are buttons for "1710 Compliance" and "Effective Force Analysis" (which is highlighted with a mouse cursor), and a dropdown menu labeled "Select an Option..."

The Time Analyzer has other powerful calculation features. Just press a button to access the calculation feature you want.

The Power of Fractile Comparisons

When you want a high-power fractile comparison press the "Comparisons" button at the bottom of any Time Analyzer page. This area supports both distribution and concentration analysis.

Here's a video that shows you how to create a fractile comparison reports using the Time Analyzer:



This is a distribution comparison of Call to 1st Arrival performance by Shift broken-down by year. The shift and year with the greatest number of responses is listed first. A goal of 360 seconds (6-minutes) was selected. Notice this "Comparisons" area breaks-down performance into four 6-hour time segments for early morning, morning, early afternoon and evening hours. The percent compliance is listed followed by the number of incidents in parenthesis.

Fractile Comparisons

This area provides fractile comparisons by data split. Begin by selecting a Time Type. Then select the Data Split. Press the Process button to start the calculations.

Time Type: Call to 1st Arrival Data Split: by Shift_Yr

Time Limits (in seconds): Begin Measurement: 0 End Measurement: 1200 Analysis Secs.: 1200

Goal in Seconds: 360 6 Mins. Exclude Zero Outliers Add PSAP/CAD Seconds

Exclude if Outside Time Limit 0

by Shift_Yr	Bldg Fires	AM1	AM2	PM1	PM2	% @ 360 secs	Secs. to 90%	Secs. to 80%	Median	Average	Zerc ^
B_2008	6	73.87% (245)	82.15% (584)	86.73% (716)	85.88% (517)	84.64% (2,052)	395	340	269 secs.	284 secs.	10
C_2008	6	76.15% (239)	87.32% (584)	89.22% (752)	87.07% (441)	87.74% (2,016)	375	330	259 secs.	269 secs.	17
A_2008	12	68.38% (272)	84.22% (577)	85.79% (669)	86.78% (469)	84.12% (1,987)	395	345	269 secs.	282 secs.	12
B_2007	4	68.20% (217)	82.93% (504)	87.53% (754)	84.81% (507)	83.80% (1,982)	395	350	272 secs.	281 secs.	4
A_2009	11	78.12% (224)	83.82% (538)	86% (736)	85.92% (483)	85.53% (1,981)	390	335	260 secs.	279 secs.	6
C_2009	5	79.09% (220)	87.30% (567)	88.82% (725)	89.17% (462)	88.37% (1,974)	370	325	256 secs.	268 secs.	12
A_2007	4	66.21% (222)	86.64% (524)	83.35% (715)	87.87% (495)	83.95% (1,956)	395	345	275 secs.	285 secs.	4
B_2009	8	71.77% (209)	82.64% (530)	85.26% (733)	86.54% (446)	84.37% (1,918)	395	345	261 secs.	281 secs.	5
C_2007	8	69% (200)	84.14% (536)	86.98% (707)	88.79% (464)	85.50% (1,907)	390	335	266 secs.	278 secs.	10

Once processed these statistics are automatically copied into the clipboard for pasting into cell A1 of any spreadsheet application. In addition, you have the option of creating and publishing HTML tables containing the same data.

If you select the "by D3 District" Data Split you will be given the option to create a KML map file that puts comparison data on Google Earth or other KML enabled geographic system.

The Time Analyzer is certainly not restricted to text or spreadsheet analysis. Locate the graph buttons in the lower portion of the Time Analyzer. Press the "Fractile Graphs" button. This is the main area for distribution and concentration analysis.

Fractile Graphs Chart Performance

Fractiles don't have to be about running numbers. You can also create useful graphs. Here's a video that shows you how to create fractile graphs using the Time Analyzer:



Here you see an area used to select fractile and compliance graphs.

Fractile Graphs

Select a Time Type, Time Increment and End Measurement for fractile counts by seconds or compliance reporting. Graphs are generated from records now in selection.

Available graphs are governed by the table selected. Check-boxes will be disabled if a report is not available for this table.

Simply select a report. You may also select reporting options associated with each report type.

Time Type:

Time Increment:

Time Limits (in seconds): Begin Measurement End Measurement

Analysis Secs

Exclude Zero Outliers
 Exclude if Outside Time Limit

Count by Fractile Seconds (Complete Above)
 Percentage Compliance

by Type
 by Quarter
 by Time
 by Year

Animated by Hour
 Accumulate Totals

by Shift

Animated by Day
 Animated by Month

(Reporting options for the two reports above)

(Select the "Count by Fractile Seconds" or "Percentage Compliance" report & options above. Checkboxes will restrict the report to only Apparatus records involving Out of Station Area or Out of District response)

Out of Station Area
 Out of District

Apparatus Only

Response Time Deployment Compliance
 EMS BLS / ALS Compliance
 EMS Transport Compliance

Incidents Only
 Incidents Only
 Incidents Only

(Select only one of these three reports.)

Department-Wide
 Districts

Stations
 All

Simultaneous Analysis

Averages
 Percent Compliance
 Deployment Compliance

Notice graphs can illustrate fractile trends as well as compliance. Compliance shows the percentage of times responses meet a minute goal. For example, if your goal is to have a company on the scene within 6 minutes, a compliance graph can measure the percentage of compliance for that goal:

- By Incident Type
- By 6-Hour Time Segment
- By Shift
- By Quarter
- By Year

Note: If you enter the Time Analyzer from the Apparatus module you will see the option to plot performance by arrival sequence. This feature is especially useful for concentration analysis.

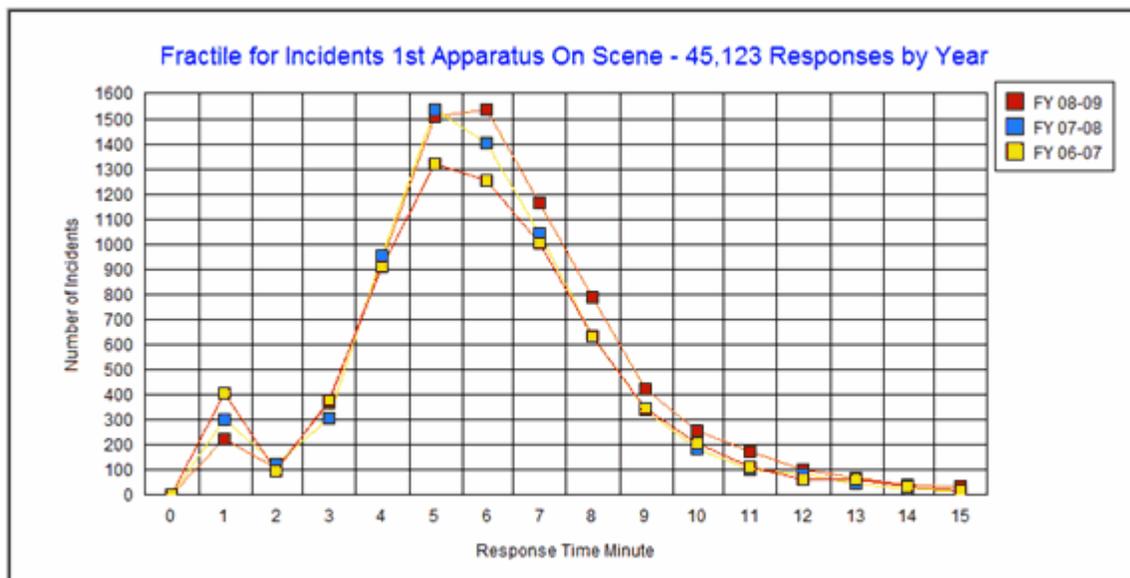
Graphs may also be animated by:

- By Hour of the Day (24)
- By Day of Week (7)
- By Month of Year (12)

A variety of other graphs may also be produced and sent to Presentations for storage and display.

Press the "Process" button to process the report you select. You may then preview your report by pressing the "Preview Graphs" button. All reports are automatically copied into the Presentations module. Here are a few examples:

In the fractile graph example below notice how the number of incidents (demand) is increasing each year. But also notice how the increase is mainly in incidents where the first apparatus to arrive on the scene arrives in 6, 7, 8 and 9 minutes. This is not a good trend. It indicates increasing in demand from more remote locations.

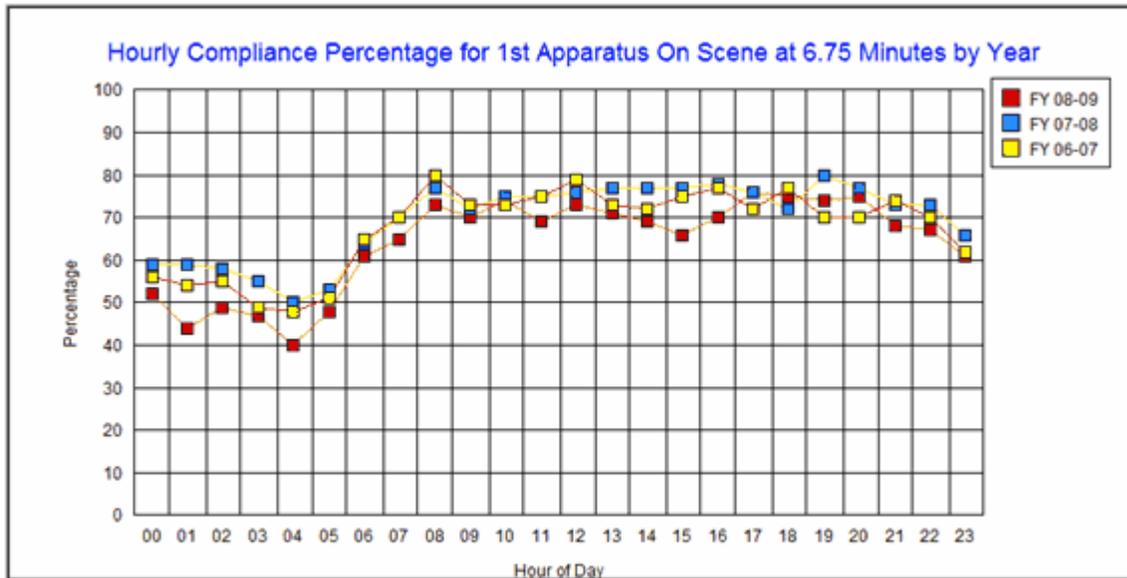


StatsFD provides dozens of fractile measurements that can be broken down by year, fiscal year, shift, time of day, etc.

In addition to fractiles fire departments today need to set performance goals and measure their compliance with the standards they set. NFPA 1710 and 1720 focus on the percentage of time certain performance goals are met. Let's see another real-world graph.

Compliance graphs measure compliance with a stated goal. Here a goal for the first

apparatus to arrive on the scene in 6.75 minutes was selected and run for more than 45,000 records. Notice how performance is worse in the early morning hours. But also notice early morning performance was worse in the most recent year. Again, the trend needs attention.

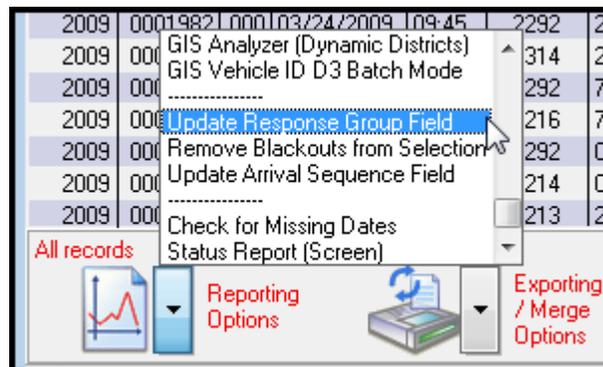


Compliance graphs always measure percentage from 0 to 100%, but many different breakdowns and goals can be selected.

Concentration Measurements Using the Time Analyzer

Distribution measures first apparatus arrivals, but measuring concentration, the assembly of apparatus teams, is a bit more challenging. **StatsFD** simplifies the process by the addition of concentration tools inside the Apparatus list view.

Press the Apparatus button and then look at the options in the Report selection bar. The first option is "Update Response Group Field". Here's what this option does.

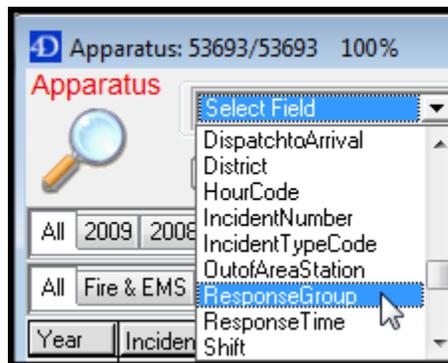


When you run a Jurisdictional Profile in Incidents hundreds of performance measurements are made and stored in tables you access via the "Jurisdiction" button. One important table in the Jurisdiction area is Vehicles. Vehicles gives you activity and performance measurements for all responding companies. It's important, early on, to enter information for each listed vehicle including response group ("Engines", "Ladders", "EMS", Others), station assignments and whether or not you want the vehicle used for calculations. For example, you may want to exclude aid companies from calculations you make within your fire department.

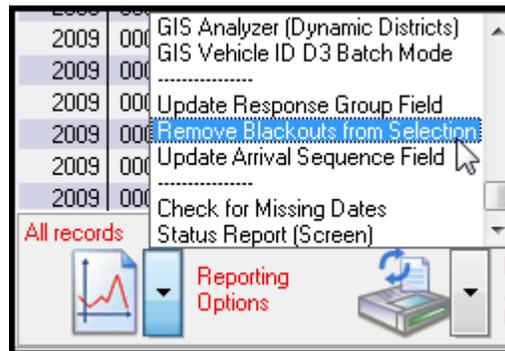
The "Update Response Group Field" option takes the response group entries for each Vehicle and copies that entry into each Apparatus record in selection. This makes it possible to search for apparatus record by response group. For example, you may be doing a concentration study on engine and ladder company arrivals. You can take a selection of apparatus responses, update each record with a response group and exclude the response groups you do not want. For example, if you exclude blank response groups, EMS response groups and Other response groups you will be left with just primary engines and ladders for you concentration study.

You can display Response Groups by selecting "ResponseGroup" from the search area in the upper left corner of the Apparatus list view. If you don't see "Response Group" on the list of fields, here's how to add it to the list:

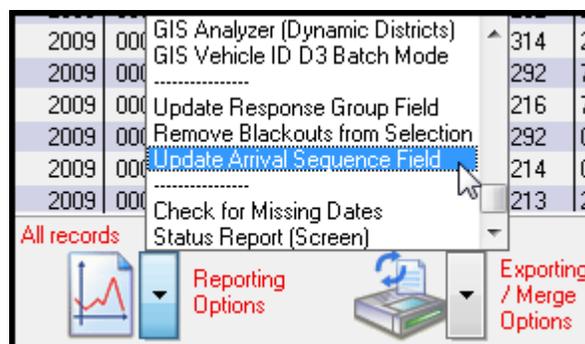
1. Press the magnifying glass icon
2. Press the "Edit Field List" in the lower left part of the search screen.
3. Click on "ResponseGroup". A plus symbol will appear to the left of the field name
4. Press the "Return to Search" button in the lower left.
5. Press Accept to return to the list view. "ResponseGroup" will be added to the list of fields.



If you wish to remove "Blackout" Vehicles from selection (those vehicles in the Vehicles area that have a check in the "B/O" checkbox, simply select the next option.



Now this is where the software gets powerful. Select "Update Arrival Sequence Field" in order to determine the arrival sequence based on the records you now have in selection. So continuing with our example you can now update the arrival sequence for just primary engines and ladders for the incidents selected.

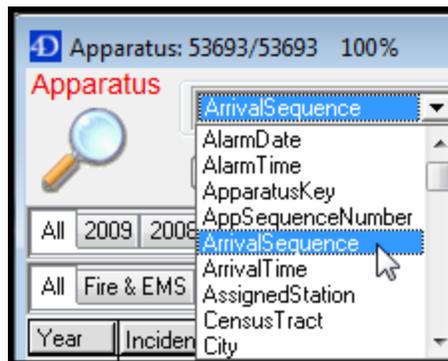


To view the arrival sequence select "ArrivalSequence" from the search box in the upper left corner. Remember if the field does not appear you can add it following the 5-step procedure above.

Do not confuse "AppSequenceNumber" with "ArrivalSequence".

"AppSequenceNumber" stands for Apparatus Arrival Sequence Number. It's static and based on all apparatus arriving at the original incident. Examples are "001", "002" and "003", etc.

"ArrivalSequence" is dynamic and based on the apparatus in selection at the time you execute the "ArrivalSequence" command. So if 4 apparatus respond to an incident; 1 Engine, followed by 1 EMS Ambulance, followed by a District Chief, followed by a ladder the "AppSequenceNumber" would be, "001", "002", "003" & "004" respectively. If only engines and ladders are in selection and the user runs "ArrivalSequence" the engine would be labeled as "1st" and the ladder would be labeled as "2nd".



Establishing the Arrival Sequence is important. When reporting on Apparatus the Time Analyzer displays a "by Arrival" check box. This check box will segregate arrivals for concentration report. This works for both fractiles and compliance testing.

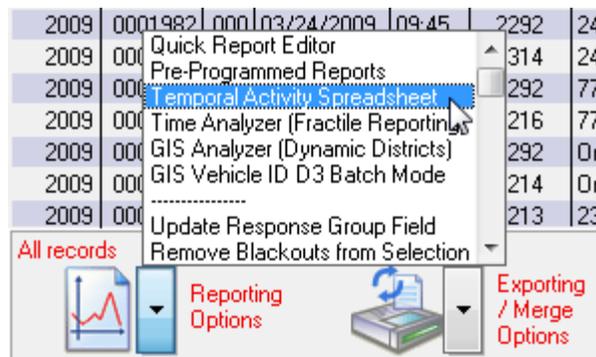


StatsFD makes it possible to do extensive concentration analysis quick and simply.

How to Run a Temporal Analysis

Most Time Analyzer reports are selected from the Time Analyzer, but there is an

exception. Click on the "Reporting Options" bar and select "Temporal Activity Spreadsheet". This option is available from both the Incidents and Apparatus modules.

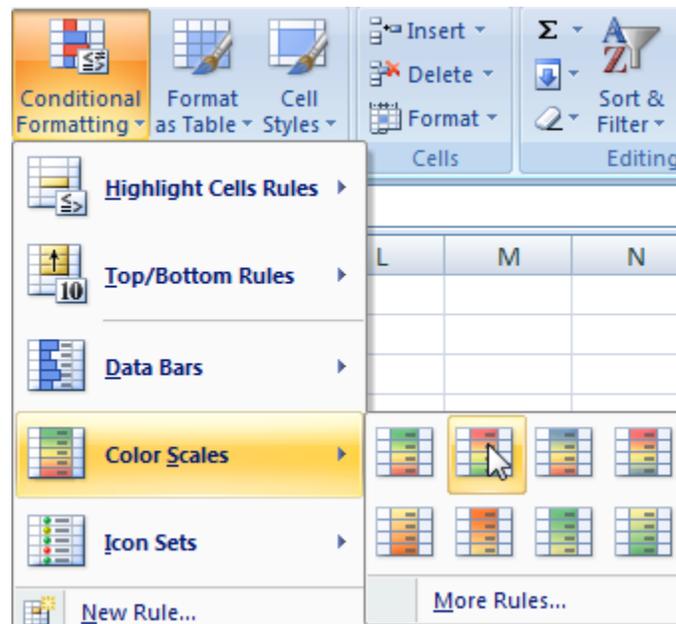


Using records in selection the Temporal Activity Spreadsheet option will calculate the number of Incidents or Apparatus responses by day of week and hour of day. Those calculations are loaded into the clipboard and ready to be pasted directly into a spreadsheet.

As soon as the option is selected you will be asked to enter a spreadsheet title. After a few seconds of calculations the clipboard is automatically loaded with temporal data. Open a spreadsheet and paste the clipboard data into cell A1 of the spreadsheet. Select the day of week columns but not the "Total" column or "Total" row at the bottom of the spreadsheet.

	A	B	C	D	E	F	G	H	I
1		Temporal Activity							
2									
3		Incident in 2009							
4									
5		1 Mon	2 Tue	3 Wed	4 Thu	5 Fri	6 Sat	7 Sun	Total
6	00:00-00:59	105	91	76	103	76	126	122	699
7	01:00-01:59	87	93	58	77	74	127	129	645
8	02:00-02:59	82	69	60	59	85	114	110	579
9	03:00-03:59	60	60	62	61	52	72	67	434
10	04:00-04:59	56	56	52	68	56	67	73	428
11	05:00-05:59	59	67	67	84	71	47	90	485
12	06:00-06:59	120	115	96	88	111	74	81	685
13	07:00-07:59	170	135	145	132	158	115	118	973
14	08:00-08:59	219	178	199	180	191	152	155	1,274
15	09:00-09:59	238	214	211	238	217	197	179	1,494
16	10:00-10:59	252	224	227	233	213	212	195	1,556
17	11:00-11:59	242	263	243	248	275	233	217	1,721
18	12:00-12:59	250	263	249	257	267	254	194	1,734
19	13:00-13:59	213	245	240	245	246	232	211	1,632
20	14:00-14:59	246	250	218	256	252	232	190	1,644
21	15:00-15:59	238	248	236	246	233	249	216	1,666
22	16:00-16:59	243	231	238	242	240	203	199	1,596

Click on the "Conditional Formatting" button and select the second option in "Color Scales".



You now have an attractive Temporal Activity chart that can be copied from Excel and pasted into a word processor.

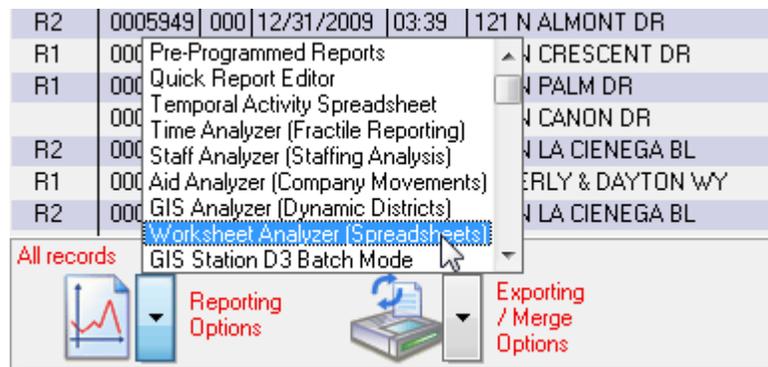
	A	B	C	D	E	F	G	H	I
1		Temporal Activity							
2									
3		Incident in 2009							
4									
5		1 Mon	2 Tue	3 Wed	4 Thu	5 Fri	6 Sat	7 Sun	Total
6	00:00-00:59	105	91	76	103	76	126	122	699
7	01:00-01:59	87	93	58	77	74	127	129	645
8	02:00-02:59	82	69	60	59	85	114	110	579
9	03:00-03:59	60	60	62	61	52	72	67	434
10	04:00-04:59	56	56	52	68	56	67	73	428
11	05:00-05:59	59	67	67	84	71	47	90	485
12	06:00-06:59	120	115	96	88	111	74	81	685
13	07:00-07:59	170	135	145	132	158	115	118	973
14	08:00-08:59	219	178	199	180	191	152	155	1,274
15	09:00-09:59	238	214	211	238	217	197	179	1,494
16	10:00-10:59	252	224	227	233	213	212	195	1,556
17	11:00-11:59	242	263	243	248	275	233	217	1,721
18	12:00-12:59	250	263	249	257	267	254	194	1,734
19	13:00-13:59	213	245	240	245	246	232	211	1,632
20	14:00-14:59	246	250	218	256	252	232	190	1,644
21	15:00-15:59	238	248	236	246	233	249	216	1,666

StatsFD connects your raw data to your office productivity products. The Temporal Performance chart in the Time Analyzer works the same way by analyzing performance measurements over time.

4.2 Run the Worksheet Analyzer

Power-up the Worksheet Analyzer

The Worksheet Analyzer is a new data analysis area. It loads spreadsheets with any field data you select. Worksheets can also be displayed as HTML tables to publish comparisons on the Internet. To access the Worksheet Analyzer select "Worksheet Analyzer (Spreadsheets)" from the "Reporting Options" selection bar:



Here's a video that shows you how to run the Worksheet Analyzer:



The simple example below was created from Incidents by selecting "B_Station" and then pressing the "Load Columns" button. Next "Year_Desc" was selected and then loaded into the rows by pressing the "Load Rows" button.

Count was selected to provide a count with sub-totals and totals. Next the "Process Text" button was pressed. Once the calculation appears on the screen it can be pasted directly into cell A1 in a spreadsheet application.

Select Values
Select a Field then press a button on right to load.

1. Load Columns --> Edit Title Station Value

2. Load Rows --> Edit Title Year Value

Year_Desc

Count

5. Process Text

Reload Clipboard Save HTML

Incidents: Count - Station by Year

There are 17,878 Incident records being analyzed.

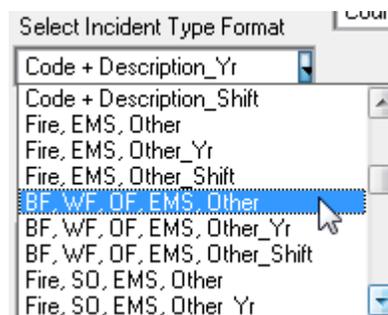
Station	1	2	3	Totals
Year				
2007	2,721	959	2,194	5,874
2008	2,787	1,040	2,291	6,118
2009	2,646	1,033	2,207	5,886
Totals	8,154	3,032	6,692	17,878

The Worksheet Analyzer enables you to create "Counts" and "Percentages" by comparing two fields. You can also create "Totals" by adding a numeric data field.

In addition to counts, totals and percentages the Worksheet Analyzer now supports 90% & 80% performance calculations. So it is now possible to show 90% Call to Arrival performance by incident type by station area.

Data Splits in the Worksheet Analyzer

You also have the option of utilizing the power of data splits. If you select the "B_IncidentType" field and load it into a column or a row you will have the option of breaking down the incident type in dozens of ways. Just select the breakdown from the pop-up list that appears.



You'll notice you can also create an HTML table to visualize worksheet data. Begin by pressing the Save HTML button. This button enables you to name and save an HTML table for displaying your worksheet on the Internet.

Once save a new "Open HTML" button will appear. Press that button to see your formatted HTML table in your default web browser.

Here's what it looks like:

Incidents: Count - Station by Year

There are 17,878 Incident records being analyzed.

Station	1	2	3	Totals
Year				
2007	2,721	959	2,194	5,874
2008	2,787	1,040	2,291	6,118
2009	2,646	1,033	2,207	5,886
Totals	8,154	3,032	6,692	17,878

4.3 Perform GIS Analysis

Geocoding Overview

Geocoding is the assignment of a latitude and a longitude to a location, most typically an address. Today, many CAD systems automatically track incident locations by latitude / longitude coordinates. If this data is available it's a good idea to import it with your manual or automatic data loads. If geocodes are not available most addresses can be geocoded using "web services".

Chances are your fire department already has geocoded the location of its fire stations. If so, press the Jurisdiction button and select "Stations". Enter the geocodes for each fire station.

If your fire stations do not appear on the list go to [Chapter 4](#) and review the procedure for "Creating a Jurisdictional Profile". Running the profile will produce a list of stations with station statistics.

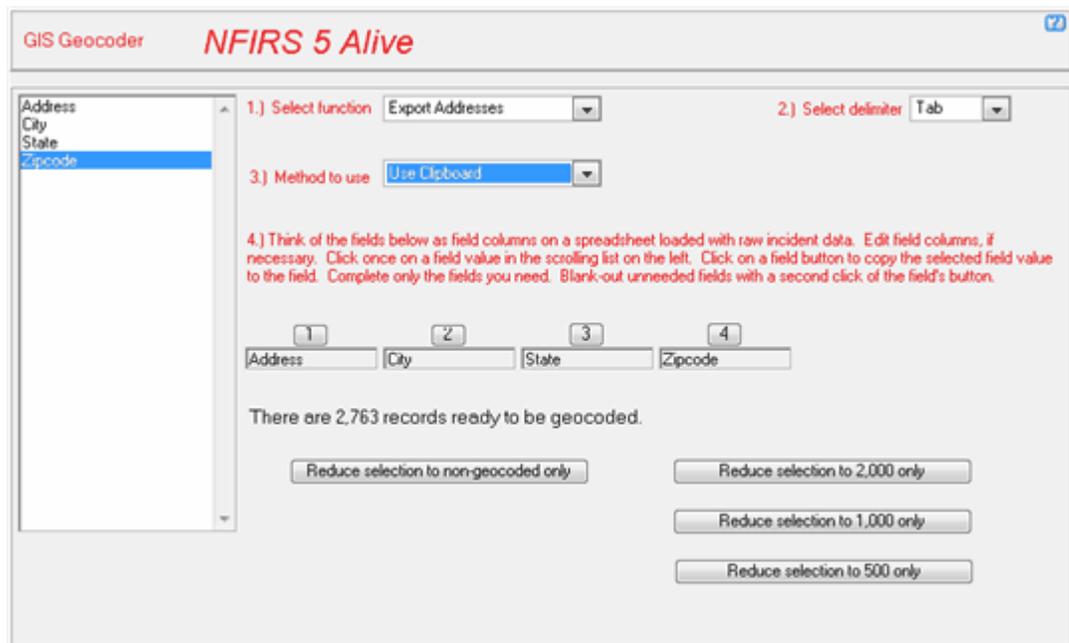
Here's How to Load Geocodes Into Existing Records

In the Incidents module select "Geocoder - Exports & Imports" under the Exporting / Merge Options button.



The first step is to export incident addresses. Here's we've selected "Export Addresses" to be separated by a tab character and delivered to the clipboard. We've set-up the field order by clicking on Address and then clicking on the "1" button, clicking on City and then clicking on the "2" button, etc.

We can then select 500 records to geocode by pressing the "Reduce selection to 500 only" button.



Research web sites that provide geocoding web services. Many are free for certain types of use. Others charge a small fee. Most will accept some variation of an address input using Address, City, State, Zipcode in a tab or comma delimited format.

Once a web service processes geocodes it will return the original fields of data with two additional fields added to each "row" of data. The added fields are latitude and longitude. When you have the geocoded text from a web service simply select "Import Addresses" in #1 above. Then select the position of the latitude and longitude in the data you are importing.

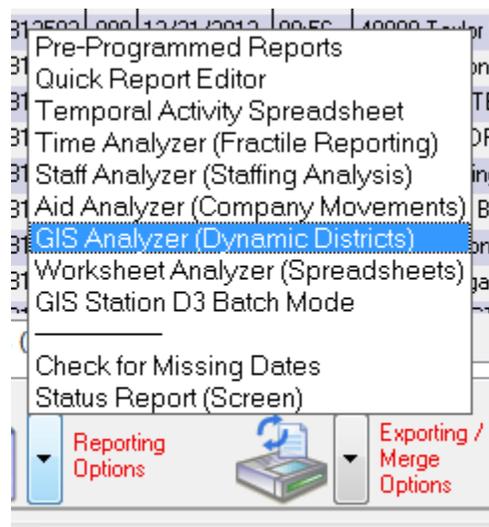
StatsFD is pretty sophisticated about the way it handles geocodes. When you export addresses only unique addresses are exported. So regardless of whether or not an address is repeated in selected Incident records, it's only exported once. Another feature is that one address will be used to geocode not only all occurrences of that address in Incidents, but it will also geocode all occurrences of the address in Apparatus and Risks as well.

Once your records are geocoded you can create GIS analysis reports.

Running GIS Analysis Reports

The GIS Analyzer analyzes Incident, Apparatus and Risks records by geographic location. GIS reports are delivered in HTML and KML (Keyhole Markup Language) geographic files. HTML files may be viewed in any web browser. KML files may then be viewed over the Internet using Google Earth. Google Earth is a geographical browser. It is a product of Google, Inc.

After selecting the records you wish to include on your map (Incidents, Apparatus or Risks) press the "Report" icon to enter the Report area. In the upper right click on the "GIS Analyzer" button.



You may now select from three GIS options.



The first option will create an HTML heat map of the records in selection at the time you run the report. This option works best with less than 3,000 records. An HTML map will be created and be ready to be displayed in any web browser.

The second option analyzes a virtually unlimited number of records by assigning each record to one of hundreds of equally-sized areas called D3 Districts. Statistics are then assembled for each D3 District allowing the processed data from each district to be displayed on a map using KML data files.

The third option is to create a location for each record in selection. Locations can be identified by an icon that marks the location with a symbol. This option is limited to about 2,000 records since there is a limited to the number of icons that may be easily seen on a map. A second option is to create a line from the originating station to the location of the incident for each incident in selection. Since lines are more easily seen this option allows for about 10,000 records to be displayed on a map.

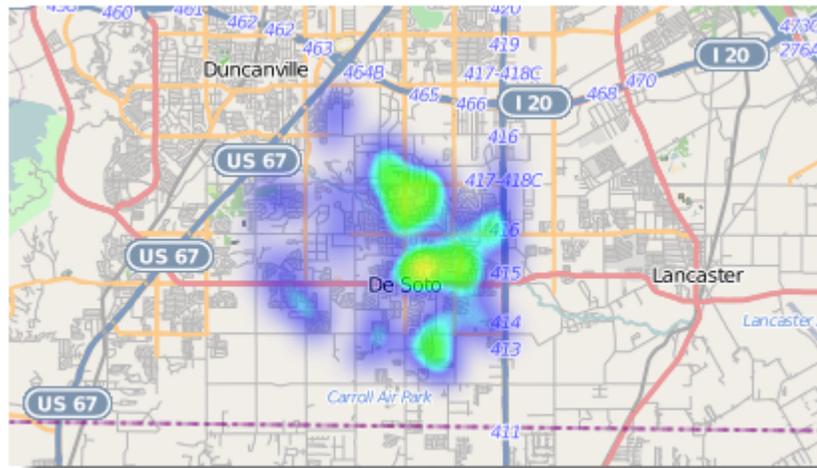
Creating Heat Maps

Here's a video that shows you how to create HTML heatmaps:



Heat maps display call densities by color. Here we see the highest call density in white. Higher call densities in red and yellow and lower call densities in blue.

The power of the heat map lies in record selection. You can view structure fires, vehicle accidents, incidents where the response time was greater than 8-minutes, etc. Heat mapping can be a great visual representation of any incident distribution you select.



Working with Equally-Sized Dynamic Districts

Dynamically Defined Districts, D3 Districts, is a "grid" of districts overlaid on a geographical area. When you press the button to enter the D3 District area the first thing you see is information about the grid of districts.

Here's a video that shows you how to work with D3 Districts:



Dynamic Districts 1 *NFIRS 5 Alive* Incidents GIS Analyzer

Divide your jurisdiction into a grid of equally sized districts. These "Dynamically Defined Districts" (D3) are used to display comparative response statistics.

1. Enter NW and SE boundary locations

Enter Latitude / Longitude for NW Corner of Jurisdiction Latitude Longitude (Usually a negative number)

Enter Latitude / Longitude for SE Corner of Jurisdiction Latitude Longitude (Usually a negative number)

North to South Miles East to West Miles Square Miles

2. Enter the number of desired rows OR columns

Rows OR Columns Cells Each Cell Dimension

North to South Miles East to West Miles

3. Enter Minute Performance Goals

Goal for First Due Travel Time Minutes Goal for First Due Arrival Time in Minutes

4. Press the Calculate button to load data from records now in selection

Press the Calculate button to create an inventory of D3 Districts and load data into those districts. After calculations have run, press the Next button to select KML mapping files. Remember, all records now in selection must be geocoded in order to be included in this calculation.

Notice the latitude and longitude of the NW corner of the jurisdiction is entered first. The next position entered is the SE corner of the jurisdiction. You can get these locations by opening Google Earth and moving the cursor over these positions. If you are unsure about the boundaries of your jurisdiction simply plot the icon location of 1,000 to 2,000 incidents. Click on the position of the NW corner of the incident icon cluster and enter the coordinates. Repeat to obtain and enter the coordinates of the SE corner.

When the coordinates are entered **StatsFD** calculates the size of the jurisdictional rectangle you've selected. You will also get a calculation for the number of square miles within the selected rectangle.

Now you need to enter the number of rows OR columns you want in your grid of cells. Generally, if you enter 25 rows **StatsFD** will calculate the number of columns needed to create nearly square grids. Cell calculations are then made and placed on the screen.

The next step is to add performance goals for first due apparatus travel time and first due apparatus response time. Then simply press the Calculate button and **StatsFD** will perform the following tasks:

- All incidents will be assigned to a D3 district.
- Performance measurements will be made for each D3 district
- A set of mapping options will be displayed for selection

After the Calculations have been made press the "Next" button to move to select maps for display.



You have the option of disabling D3 Districts that have fewer than the specified number of incidents. You may also create 3D district boxes where the height of the box indicates the relative run activity of the district. This is one very powerful feature.

You also have the ability to export map data to Excel. If you press the "Grid Map to Excel" the data in the map you select will be available for pasting into Excel.

Any map created will appear in the Map folder. In Google Earth simply expand the File menu and select "Open". Open the new file in the Map folder.

Protection Levels

Emerging standards are requiring fire departments to relate performance to population density. The theory is that you cannot expect to provide the same level of fire department services in a rural area as in a metropolitan center. The following descriptions are frequently used to define population density:

- Metropolitan
- Urban
- Suburban
- Rural
- Wilderness

Here's a video that shows you how to setup protection levels:



Your fire department may not have any metropolitan or wilderness areas but you can divide your jurisdiction into the three remaining protection levels as desired. Here's how it's done.

Protection Level Thresholds
 Divide your jurisdiction into two or more Protection Levels. This application supports Metro, Urban, Suburban, Rural and Wilderness levels. Initial setup is based on volume of apparatus operations by D3 District. Set minimum activity levels for each Protection Level you select. You may fine-tune your assignments by dragging and dropping D3 Districts from level to level. Create a map of your levels to double-check then save the levels into all records.

View Levels Press "View" to view D3 Districts by Protection Level **Setup Levels** Press "Setup Levels" to assign D3 Districts to Levels by minimum operations **Clear Levels**

Protection Levels: Metro Urban Suburban Rural Wilderness Check the levels that apply in your jurisdiction. Enter a minimum number of ops for each level. Enter a zero in last selected level.

Minimum Operations: Metro: 2000 Urban: 1000 Suburban: 500 Rural: 30 Wilderness: 0 **Assign**

Drag & Drop D3 Districts into the desired protection levels below

Metro	Urban	Suburban	Rural	Wilderness	Outside
H7	I8	H9	O2	A1	
H8	I9	I7	O3	A10	
	J5	J11	E2	A11	
	K14	J12	E3	A12	
	K7	J6	E4	A13	
	P18	J7	F2	A14	
		J8	F3	A15	
		K12	F4	A16	
		K13	F5	A17	
		K15	F6	A18	
		K6	G4	A19	
		K9	G5	A2	
		L14	G6	A20	
		L15	G7	A3	
		N9	G8	A4	
		P14	H4	A5	
		P15	H5	A6	
		P16	H6	A7	
		Q16	I10	A8	
		S17	I11	A9	
			I12	B1	

Apparatus Operations by D3 District

H8	3409
H7	2995
P18	1387
K14	1370
K7	1330
I8	1263
I9	1163
J5	1149
L14	979
L15	938
P14	875
J6	842
P15	826
J7	737
I7	719
K12	706
P16	700
K13	654
J12	652
J11	633
K15	598
N9	580
H9	579
K6	558

Press "Create Map" to create a map of selected Protection Levels: Metro-Blue, Urban-Red, Suburban-Yellow, Rural-Green, Wilderness-Black. **Create Map**

Press "Update Records" to update all records with a Protection Level based on D3 assignments above left. **Update Records**

Press the "Setup Levels" button. Protection level check boxes will appear. Click on the check boxes that apply in your community.

Under each check box enter the minimum number of apparatus operations in the D3 district to qualify it for inclusion in that protection level. In the example above 2,000 apparatus operations or more are required to classify the D3 district as a Metropolitan area.

Do not get hung-up on the number. It's all relative. The only purpose of this numbering is to roughly sort-out protection level assignments by activity. After the rough sorting it's up to you to "drag and drop" the D3 district into the correct protection level. You have total control of the process.

When all D3 districts have been dragged-into a protection level press the "Create Map" button to see a map of D3 Districts by Protection Level. If the map looks OK press the "Update Records" button. This button will assign a Protection Level to all

Incidents and Apparatus records allowing you to analyze performance by protection level.

If you enter the GIS Analyzer from the Apparatus module you will see additional reporting options under D3 Districts.

You have the ability to define travel time performance goals as part of the D3 District setup. Follow the instructions on the screen.

Divide your jurisdiction into a grid of equally sized districts. These "Dynamically Defined Districts" (D3) are used to display comparative response statistics.

- 1. Enter NW and SE boundary locations**
Enter Latitude / Longitude for NW Corner of Jurisdiction Latitude Longitude (Usually a negative number)
Enter Latitude / Longitude for SE Corner of Jurisdiction Latitude Longitude (Usually a negative number)
North to South Miles East to West Miles Square Miles
- 2. Enter the number of desired rows OR columns**
Rows OR Columns Cells
Each Cell Dimension
North to South Miles East to West Miles
- 3. Enter Minute Performance Goals**
Goal for First Due Travel Time Minutes
Goal for First Due Arrival Time in Minutes
Travel Time Goals for Company & Brownout Calculations
1st Arrival Eng EMS Ladder
Maximum Goal Eng EMS Ladder
- 4. Press the Calculate button to load data from records now in selection**
Press the Calculate button to create an inventory of D3 Districts and load data into those districts. After calculations have run, press the Next button to select KML mapping files. Remember, all records now in selection must be geocoded in order to be included in this calculation.

After calculations have been made press the "Travel Time & Brownouts" button. This area allows you to create many maps illustrating travel time performance. By eliminating the contributions of one or more companies for one or more time periods it's possible to create animated maps that illustrate the effect of company brownouts on travel time performance.

Travel & Brownout Analysis **Apparatus**

NFIRS 5 Alive

Primary Apparatus Travel Time Analysis
 This area calculates responses and travel time estimates geographically. All maps are animated by time of day. You may test travel time compliance by entering travel time goals in the boxes below. Press the "Recalculate" button if Travel Time Goals are changed. Optionally, you may select companies for brownout by time of day.

Travel Time Goals for: 1st Arrival Eng EMS Ladder
 Maximum Goal Eng EMS Ladder

Select brownout companies and brownout times

Company	Responses	Type	00:00-05:59	06:00-11:59	12:00-17:59	18:00-23:59
(Click on the company you wish to brownout.)						
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2291	1836	EMS				
2292	1772	EMS				
2211	1362	Engines				
2295	1079	EMS				
2214	1053	Engines		B/O	B/O	
2212	920	Engines				
2213	833	Engines				
2216	529	Engines				
2275	430	Ladders				
2215	149	Engines				

Grid Reports

- Incident Count by D3 District
- Apparatus Responses by D3 District
- Engine Responses by D3 District
- EMS Responses by D3 District
- Ladder Responses by D3 District
- Median Travel Minutes (CAD)
- Median Travel Mins. Engines (CAD)
- Median Travel Mins. EMS (CAD)
- Median Travel Mins. Ladders (CAD)
- Median 2nd Due Travel Minutes
- Median 2nd Due Travel Mins. Engines
- Median 2nd Due Travel Mins. EMS
- Median 2nd Due Travel Mins. Ladders
- Travel Time Compliance Percentage (CAD)
- Travel Time Compliance Engines (CAD)

Ignore districts with less than plot(s).

Create 3D District Boxes - Height Shows Count

Calculate Using 1st Arrival Apparatus Only

Show Only Areas Affected by Brownout BEFORE

Show Only Areas Affected by Brownout AFTER

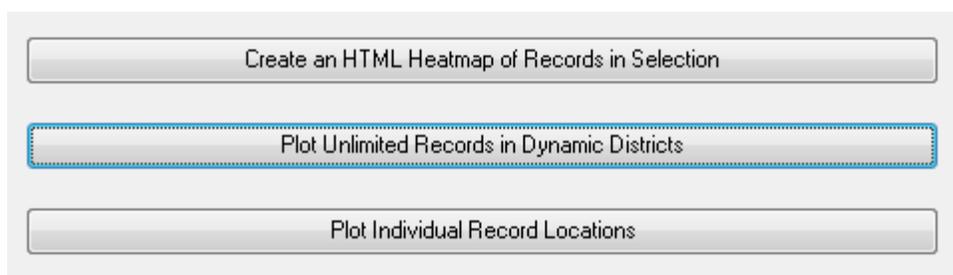
(Press "Recalculate" after changing Travel Time Goals)

In the left scrolling list click on the companies you wish to brownout. Check the brownout time periods in the check boxes above. On the right select the map you wish to construct. You may select options to 1.) ignore inactive districts, 2.) create 3D boxes using height to show activity, 3.) calculate travel times for first arriving apparatus only, 4.) show only areas affected by brownout before the brownout or 5.) show only areas affected by the brownout after the brownout takes place.

All travel time estimates are based on past performance data.

How to Plot Individual Record Locations

To plot the location of individual records press the "Plot Individual Record Locations" button.



You will see a list of map reports on the right. Select the report you wish to compile.

Here's a video that shows you how to plot individual incident locations:

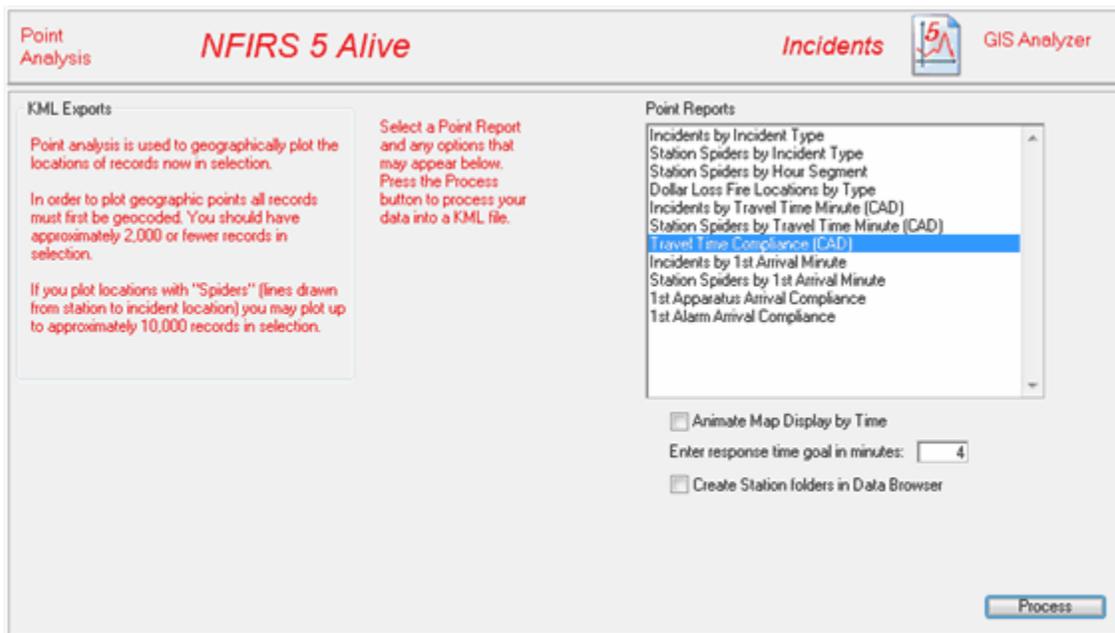


Individual record locations can be marked by icons of different shapes and colors or by "spiders". Spiders represent incidents by drawing a line from the station of origin to the location of the incident.

Depending on the report you select you may see different options appear below the list of reports.

These options include the following:

1. Ability to animate the Google Earth map by time of day.
2. Enter a travel time performance objective.
3. Create folders to turn-on and off incident locations by station ID.



Any map created will appear in the Map folder. In Google Earth simply expand the File menu and select "Open". Open the new file in the Map folder.

StatsFD KML files contain a lot of information. After opening the KML file in Google Earth make sure you spend the time exploring your map and picking-out trends.

Google Earth provides tools to zoom and tilt the map image. Hold down the shift key while pressing the left mouse button to tilt the map. Try different angles. Zoom in and out using the tools in the upper right corner of the Google Earth display.

If any maps seem overly complex check-out the left side of Google Earth. There you will see a series of folders that can be expanded or contracted. Each folder can be turned on and off. Within each folder individual data elements may also be turned on and off. Use the folders and element "switches" to enhance the display of data as you zoom into different levels on the map.

If you are viewing an animated map make sure you click on the timeline enable button in that appears in the upper-right area of the map. On the left side of the time-line you can click a button that allows you to slow the animation speed and set the time zone for the animation.

Create Map Files for GIS Applications

"Mapping Files" is used to create mapping files to plot locations using Microsoft Streets & Trips or Microsoft MapPoint software. Unlike other reports produced in the GIS Analyzer, Mapping Files does not require locations to be geocoded before running a map report.

After selecting records in Incidents, Apparatus, Responders, Patients or Members, press the "Report" button to enter the Report area. In the upper right click on the "GIS Analyzer" button.

Press the "Plot Individual Record Locations" button.



Select the field contents of the mapping files and then select how you wish to segregate map files. For example, you can segregate map exports by Incident Type (fire, EMS or other), by hour, by response time minute, etc. After fields and files are selected mapping files will be automatically exported into a "Map" folder. The path to the Map folder is stored in **StatsFD** and does not need to be selected when mapping files are created.

After exporting start your mapping program. Microsoft Streets & Trips is inexpensive and provides good "push-pin" locations for incidents. If you wish to do more in-depth analysis using Census data consider Microsoft MapPoint software. "Mapping Files" is not restricted to Microsoft mapping products. It is flexible enough to work with many GIS software packages.

Once you open your mapping software package, simply import data through the "Import Data Wizard...".

The final step is to assign specific "push-pin" colors and styles to each map file import. For example, you can import the fire data file and use a red push-pin color, blue for EMS and black for other as illustrated above.

Most mapping programs are hierarchical allowing you to zoom in and out. Remember you can copy the map and paste it into reports as required.

All mapping files are exported into the Map folder. If you don't know where it is, simple check for the location under the "Mapping" tab in the Operations window.

To open each of the files start your mapping software application. Under the Data file menu select the Data Import Wizard.

Import each file. A separate set of map points will be created for each import. Finally, select a unique color or "push-pin" style for each set of points.

When using "Mapping Files" remember not all locations will plot. Our experience is between 70% - 85% of the addresses in each map file will be recognized by the mapping software you select, however, your results may vary.

In general street addresses with street numbers and accurately spelled street names and zip codes will load with the highest degree of accuracy. "Descriptions" such as "Approx. 3 Miles North of Exit 20 on I70" will seldom load accurately. Street intersection descriptions may also be problematic.

4.4 Monitor Staffing Strain

Monitor Staffing Stress

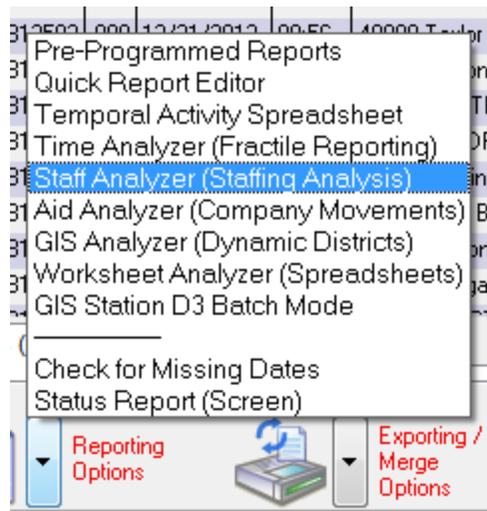
If incidents never overlapped you could simply staff your fire department to handle the most complex incident you encounter on a regular basis.

But incidents do overlap so when analyzing staffing requirements its necessary to analyze the number of incidents, the number of responders to each incident as well as the number of total responders required when overlapping or simultaneous incidents occur.

Here's a video that shows you how to analyze staffing patterns:



Unlike the Time Analyzer the Staff Analyzer only requires NFIRS 5 Incident and Apparatus reports to perform most calculations. No CAD data is required. Begin by selecting the Incidents you wish to analyze. From the Incidents list view press the Reports button then press the Staff Analyzer button to begin:



The Staff Analyzer will perform level of activity calculations, simultaneous incident calculations, calculations for the number of responders required for each incident as well as calculations for the number of total responders required because of simultaneous incident activity. The Staff Analyzer will then create three staffing charts comparing required responder and total responder staffing requirements by hour of day, day of week and by month.

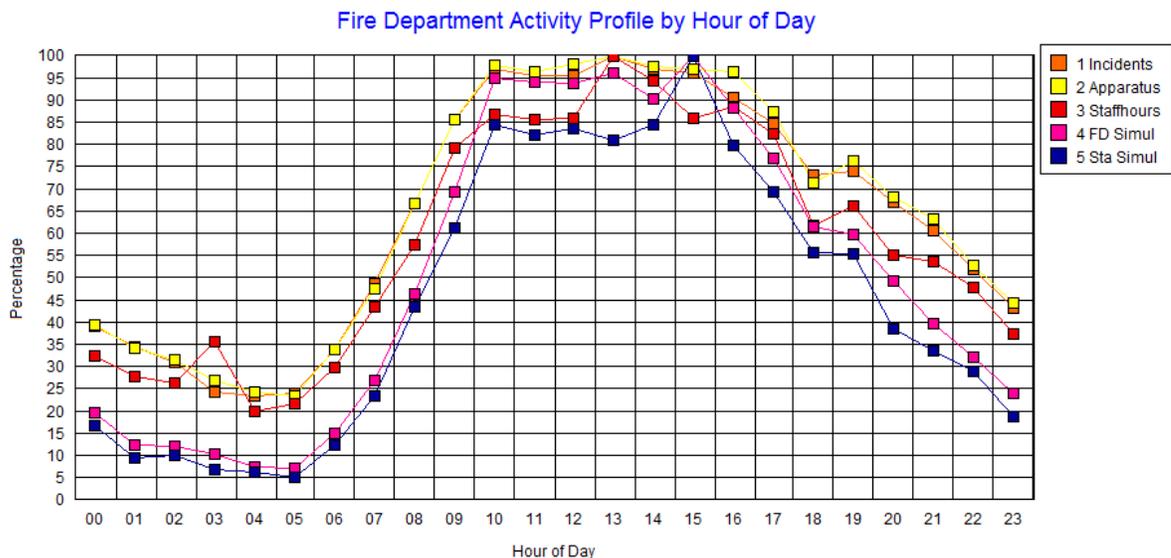
You cannot address performance declines when fire department activity is low the same way you address performance declines during activity peaks. To truly understand fire department operations you must analyze performance and activity together.

StatsFD features new reporting tools that measure activity so you can identify "minimal", "transitional" and "peak" activity hours. This information is incorporated into data splits for precise measurement of performance under various demand loads.

Measuring Activity Hours

At the Operations Window press the Incidents button. Select the records you wish to use in the Activity report. Click on the Reporting Options bar and select "Staff Analyzer".

When the Staff Analyzer appears click on the "Activity Profile" button. After the report processes you can preview the graph by pressing the "Preview Graph" button in the lower right corner of the screen. This button will display a graph similar to the one below:



Here's what the graph's legend means:

1. Activity by number of Incidents
2. Activity by number of Apparatus responses
3. Activity by staff hours per hour
4. Activity by simultaneous incidents department wide
5. Activity by simultaneous incidents within single station areas

Peak hours 09:00-17:00

Minimal hours 00:00 – 06:00

Once you've analyzed the activity hours for your fire department it's time to enter those under the Preferences button.

Entering Activity Levels

At the Operations Window press the Preferences button. Now press the "Incident Types" tab.

Activity - Identify "Minimal" and "Peak" activity hours below. This allows performance to be compared by activity level and is useful for staffing analysis. Hours of minimal and peak activity can be identified by pressing "Incidents" and selecting the Staff Analyzer reporting option. Run the Activity Profile.

Minimal Activity Hours	Peak Activity Hours	Hours (00-23) not classified as "Minimal" or "Peak" will be automatically classified as "Transitional".
00 ▲	09 ▲	Defaults
01 ▢	10 ▢	
02 ▼	11 ▼	
03 ▼	12 ▼	
Add	Add	
Delete	Delete	

Enter "Minimal Activity Hours" and then enter "Peak Activity Hours". All other hours will automatically be classified as "Transitional Hours". Once this is accomplished you have set the activity levels for data split performance analysis. You may do a comparative activity analysis using any report with a data split.

Begin by pressing the Process Simultaneous button. The Staff Analyzer will request you enter a goal for the arrival of the first apparatus on the scene. It will then process a text analysis of simultaneous incidents while it creates a set of graphs to illustrate simultaneous activity.

Press the Preview Graphs button to see the graphs.

The simultaneous text analysis may be copied to your clipboard using the "Select an Option..." button. You can also configure the text for an Excel document by pressing the "Link Simultaneous to Excel" button.

Reports *NFIRS 5 Alive* Staffing

Staff Analyzer
The Staff Analyzer measures the impact of simultaneous alarms on staffing. "Responders" refers to the number of people responding on an incident. "Total Responders" adds the number of people responding on all other active incidents. If there were no simultaneous alarms the "Responder" and "Total Responder" profiles would match precisely. When plotted together the right-shifting of "Total Responders" models the impact of simultaneous alarms.

- 1.) Press a "Process" button to view text statistics.
- 2.) Press a "Link" button if you wish to move text data into an Excel spreadsheet.
- 3.) Press "Calculate Comparative Graph" to create animated comparative staffing graphs.

Press the "Preview Graphs" button to preview processed graphs at any time.

All records

Text Statistics
Press a "Process" button (right) to create a text tractile. Press the graph buttons (below) to assemble results in graph form.

There are 2,763 Incident records being analyzed.

Simultaneous Incidents: 000
Incidents: 1,684
Percentage: 60.95%
Cumulative percentage: 60.95%
Median first due minutes: 5.43
First due compliance %: 61.22%
Structure Fires: 16 1.00%
All Fires: 67 4.00%
EMS Incidents: 1,190 70.10%
Other Incidents: 437 26.00%
Median Duration: 20.98

Simultaneous Incidents: 001
Incidents: 816

1.) **Process Simultaneous**
Process Responders
Process Total Responders

2.) **Link Simultaneous to Excel** Select an Option...
Link Responders to Excel
Link Total Responders to Excel

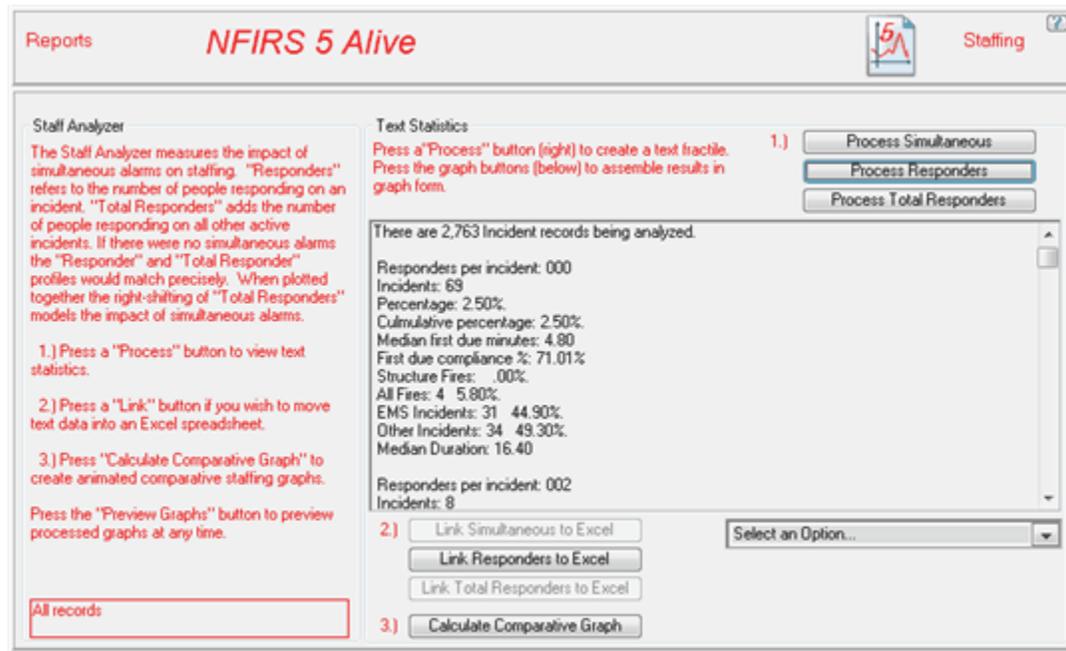
3.) **Calculate Comparative Graph**

Now press the Process Responders button. The Staff Analyzer will request you enter a goal for the arrival of the first apparatus on the scene. It will then process a

text analysis of responders by incident. It will also create a set of graphs to illustrate responder activity.

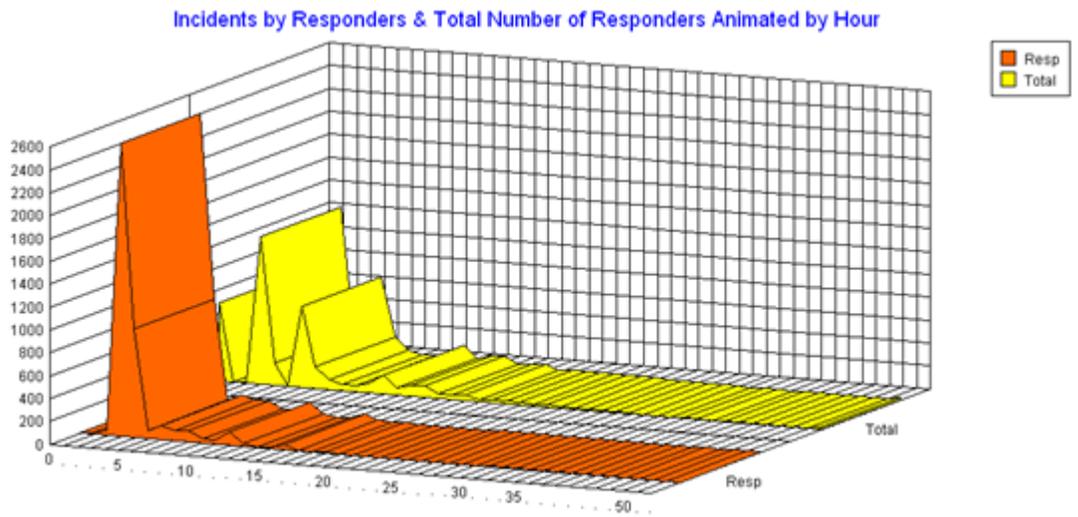
Press the Preview Graphs button to see the graphs.

The responder text analysis may be copied to your clipboard using the "Select an Option..." button. You can also configure the text for an Excel document by pressing the "Link Responders to Excel" button.



Finally, press the Calculate Comparative Graph button. This will start a process to create three animated graphs illustrating the demand for responders over time.

Here's an example graph:



The red 3D area graph illustrates the number of incidents (vertical axis) by the number of people required to handle the incidents (horizontal axis). The red shows responder demand without any simultaneous incidents. The yellow illustrates total responder demand. Any movement of the graph to the right and higher indicates increased responder demand. Notice how overall demand requires larger numbers of responders because of simultaneous incident activity.

Be sure to animate the graphs to illustrate staffing demand by hour of day, day of week and by month.

4.5 Analyze Aid Patterns

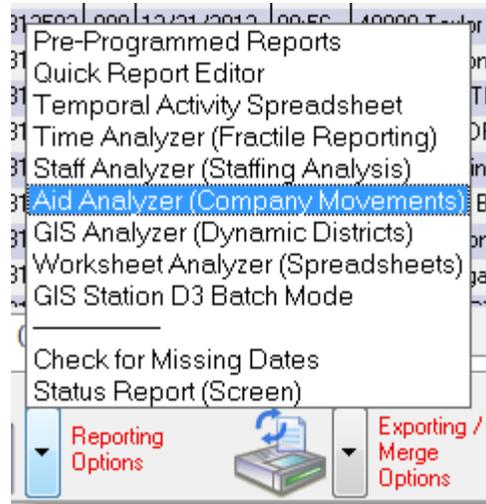
Analyzing Aid Patterns

We've seen the Staff Analyzer identifies gross staffing requirements for a "department-wide" view. The Aid Analyzer adds to your knowledge by telling you where the activity is occurring. Begin by selecting the Incidents you wish to analyze. Make sure you only include the incidents from a single-fire department.

Here's a video that shows you how to analyze aid between departments and between stations:



From the Incidents list view press the Reports button then press the Aid Analyzer button to begin:



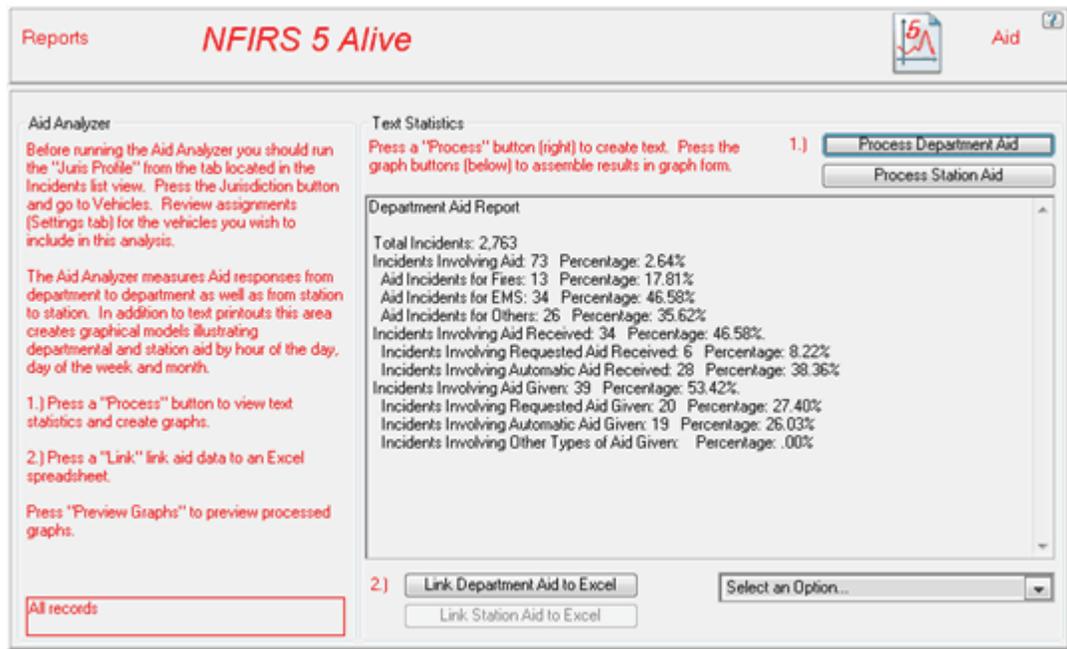
The Aid Analyzer first examines responses into and out of the fire department. It creates an inter-department aid model that reveals whether or not there is a balance between aid given and aid received.

Next the Aid Analyzer examines responses within the fire department. An animated model is created to illustrate aid moving between fire stations within the community. This is a very powerful way to illustrate geographic shifts in response demand by hour of day, day of week and month.

Begin by pressing the Process Department Aid button. The Aid Analyzer will then process a text analysis of inter-department aid while it creates a set of animated graphs to illustrate interdepartmental aid activity.

Press the Preview Graphs button to see the graphs.

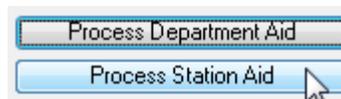
The interdepartmental aid text may be copied to your clipboard using the "Select an Option..." button. You can also configure the text for an Excel document by pressing the "Link Departmental Aid to Excel" button.



Now press the Process Station Aid button. The Aid Analyzer will now focus on station to station aid while it creates a set of animated graphs to illustrate station aid activity.

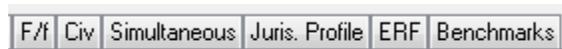
Press the Preview Graphs button to see the graphs. Note the Station Aid graph only tracks responses that crossover Station response area boundaries. Activity within any given station area does not appear on the graph.

The station aid text may be copied to your clipboard using the "Select an Option..." button. You can also configure the text for an Excel document by pressing the "Link Station Aid to Excel" button.



4.6 Locate Simultaneous Incidents

Locating Simultaneous Incidents



If you go to the Incidents list view you will see a "Simultaneous" tab. Press this tab to calculate and store simultaneous response information in each incident.

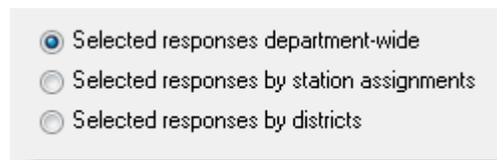
Simultaneous data records how many incidents were underway when a new incident occurred. So, for example, if a new incident occurs when 1 other incident is underway, the new incident record receives a simultaneous value of 1. If two incidents were underway then the new incident receives a simultaneous value of 2, etc.

To perform this critical calculation:

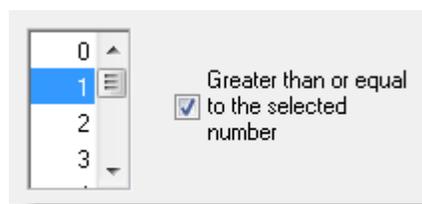
1. Open the Incidents list view.
2. Click on the Simultaneous tab.
3. Press the "Recalculate" button.

Once you have recalculated press the Search button to locate the simultaneous incidents you require.

By default Simultaneous incidents locates incidents that occur when at least one other incident is underway way department-wide. It is, however, possible to locate simultaneous incidents within individual station areas and districts. To detect simultaneous incidents within station areas select the second option illustrated below:



By default Simultaneous incidents locates all the incidents that occur when at least 1 incident is underway. You can increase that default number of selecting a higher number for a threshold in the drop down list below:



4.7 Create a Jurisdictional Profile

How to Create a Jurisdictional Profile

The Performance Matrix is created under the "Juris. Profile" tab in Incidents. You may also create a Performance Matrix by selecting the Incidents you wish to include in the matrix and then opening the "Time Analyzer". Press the "Performance Matrix"

button and follow the instructions on the screen.

Here's a video that shows you how to run a Jurisdictional Profile:



Demand

The demand matrix quantifies service demand. All numbers that indicate quantity or percentage of quantity are printed in blue.

Demand is broken down by incident type. Percentages indicate the percentage of incidents occurring as follows:

- AM1 00:00 - 05:59
- AM2 06:00 - 11:59
- PM1 12:00 - 17:59
- PM2 18:00 - 23:59

Demand can be measured for the department, each station, each district, each D3_District and each vehicle. Here's an example demand matrix for station responses:

Demand Matrix		Station 4		01/01/10 - 12/31/10
Station Demand by Incident Type				2010 All Incidents
All Incidents	Fire Incidents	EMS Incidents	Other Incidents	
4,493 13 / 26 / 33 / 28 % AM1 / AM2 / PM1 / PM2	93 16 / 18 / 33 / 32 % AM1 / AM2 / PM1 / PM2	3,459 13 / 26 / 32 / 29 % AM1 / AM2 / PM1 / PM2	941 12 / 26 / 35 / 26 % AM1 / AM2 / PM1 / PM2	
11,826 Apparatus Responses	29 Building Fires	3,177 Non-Vehicle Responses	87 Cancelled Enroute	
11,188 Staff Hours	12 Wildland Fires	282 Vehicle Responses	528 False / Good Intent	
\$1,527,067 Dollar Loss	4 Vehicle Fires	19 Technical Rescues	17 Hazmat	

Distribution

Distribution measures performance based on goals set by your fire department. Compliance percentages 90% or greater are colored green; 80% or better yellow and less than 80% red:

Distribution Matrix		Station 4	
Station Distribution by Performance Type		01/01/10 - 12/31/10	
Call Processing @ 01:30	Turnout @ 02:00	Travel @ 04:00	Call to Arrival @ 07:30
77.1%	93.9%	64.9%	82.2%
Compared to Department % Other Incidents			
-2.8%	2.1%	-1.8%	-1.1%
02:04	01:51	05:44	08:24
for 90% compliance	for 90% compliance	for 90% compliance	for 90% compliance
3,365 / 999	3,983 / 259	2,752 / 1,488	3,600 / 781
Pass / Fail	Pass / Fail	Pass / Fail	Pass / Fail
% Compliance Time of Day			
78 / 81 / 74 / 75	80 / 94 / 97 / 96	58 / 63 / 67 / 65	71 / 83 / 84 / 83
AM1 / AM2 / PM1 / PM2			

Distribution / Shift

Distribution measurements are also broken down by shift:

Distribution Matrix		Station 4		01/01/10 - 12/31/10	
Station Distribution by Performance Type				2010 All Incidents	
Call Processing 77.1% Station Compliance	Turnout 93.9% Station Compliance	Travel 64.9% Station Compliance	Dispatch to Arrival 79.1% Station Compliance	Call to Arrival 82.2% Station Compliance	
77.8% Shift A	92.6% Shift A	63.2% Shift A	75.6% Shift A	79.7% Shift A	
77.9% Shift B	93.5% Shift B	64.1% Shift B	79.7% Shift B	82.3% Shift B	
75.6% Shift C	95.6% Shift C	67.5% Shift C	82.1% Shift C	84.5% Shift C	

Concentration

Concentration is also measured for all apparatus, EMS, engines and ladders:

Concentration Matrix		Station 4		01/01/10 - 12/31/10	
Minutes to 90% Travel Time / Responses				2010 All Incidents	
Any Apparatus	Primary EMS	Primary Engines	Primary Ladders		
05:37 1st Arrival 4,310	05:59 1st EMS Arrival 3,279	05:28 1st Engine Arrival 1,601	07:20 1st Ladder Arrival 143		
09:41 2nd Arrival 3,307	08:00 2nd EMS Arrival 24	06:06 2nd Engine Arrival 253	09:47 2nd Ladder Arrival 3		
08:50 3rd Arrival 616	08:11 3rd EMS Arrival 5	07:01 3rd Engine Arrival 96	3rd Ladder Arrival		
07:04 4th Arrival 216	07:47 4th EMS Arrival 1	10:30 4th Engine Arrival 39	4th Ladder Arrival		

The primary area for developing matrix reports is the "Juris. Profile" tab.

F/f Civ Simultaneous Juris. Profile ERF Benchmarks

The profile breaks down performance into four matrices:

1. Demand
2. Distribution
3. Distribution / Shift
4. Concentration

Each of these matrices calculates by Department, Station, District and D3 District. Vehicle calculations are made for Demand, Distribution and Distribution / Shift since a single vehicle does not create concentration data.

Every time a profile is started it performs three calculations. These calculations are, 1.) stats for "All Incidents", 2.) stats for "In-jurisdiction Fire & EMS" (emergency incidents) and 3.) a user-defined option that by default produces stats for "Non-fire and EMS Incidents", but can be set to develop stats for any selection of records. If you wish to create a user-defined performance matrices for a selection of incidents simply select the record set and store it in the Set area (Incidents list view) under the title "Jurisdiction".

Remember, before running a Jurisdiction Profile you need to update information in the Vehicles area. See the next chapter for information.

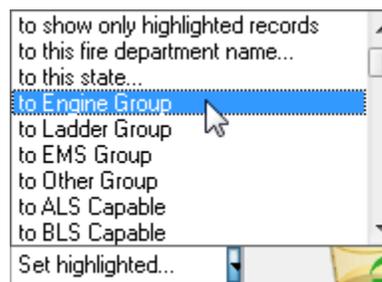
Vehicles is a very powerful module located in the Jurisdiction area (Operations Window, Jurisdiction button, Vehicles button). Not only does it provide a powerful set of performance matrices, it also allows you to enter Vehicle information that's used for a variety of **StatsFD** reports.

Before performing a Jurisdictional Profile you should update information for your primary vehicles. If no Vehicles are listed when you open this area press the "Load Vehicle ID's" button at the bottom of the list view. When this operation is complete you will have a list of all vehicles.

In the list view double-click on each primary Vehicle. Press the "Settings" tab and enter information for each primary vehicle. The information you enter will remain until changed.

Important: Enter the "First Due Station" in the format used to display the "Station" ([Incidents]B_Station) field in Incidents. If the station is listed as "01" then you must enter "01" in the Vehicles area. Each primary vehicle should be assigned to a response group and EMS capability should be entered using the available radio buttons.

In the Vehicles list view you can save time by holding the "Ctrl" key down and clicking on each engine company. With all engine companies highlighted you can open the "Set Highlighted" drop down and select "to Engine Group". This will set each selected record to the Engine group. You can repeat this procedure for other company types.



Make sure you enter each primary vehicle's response group; Engine, EMS, Ladder or Other.

You may also click a checkbox to ignore this vehicle when calculating out of district response. This is call "Blackout" or "B/O".

The ability to update Vehicle data adds a powerful dimension to **StatsFD** reporting. Make sure you keep Vehicle information up-to-date.

All of the calculations necessary to create performance matrices are accomplished in one operation called a Jurisdictional Profile. Begin by pressing the "Juris. Profile" tab.

The Jurisdictional Profile allows you to set a date range. The first profile will measure all incidents between the dates you select. The second profile will narrow incidents down to in-jurisdiction fire & EMS incidents. By default the third profile measures performance for non-fire and EMS incidents. You may, however, choose to profile any selection of records by creating a "Jurisdiction" set and giving it a short title.

The screenshot shows a web application window titled "Jurisdiction Profiles". The main heading is "Jurisdiction Profile *NFIRS 5 Alive*". Below this, there is a red warning message: "This operation will profile the Departments, Stations, Districts, D3 Districts, Addresses, Vehicles & Members areas located under the Jurisdiction button. Before running this extensive analysis you should have updated Response Groups and Station Assignments in the Vehicles area under the Jurisdiction button." Below the warning, instructions state: "Begin by entering a begin and end date for incidents to profile. Generally these dates will be for a 12-month period. Once the dates are entered 3 comparative profiles are automatically set up:" followed by a numbered list: "1. Profile of All Incidents between the dates.", "2. Profile of Fire & EMS Incidents (no Aid Given) between the dates.", "3. Profile of Non Fire & EMS incidents between the dates." There are input fields for "Begin Date" (1/1/2010) and "End Date" (12/31/2011), and a checkbox "Include only incidents now in selection between dates" which is unchecked. Below this, another instruction says: "Optionally you may create a record set called Jurisdiction to be profiled instead of the 3rd profile option above. For example, you may wish to profile the prior year's Fire & EMS incidents for a performance comparison. All you need to do is select last year's records and name the set 'Jurisdiction' saving it under 'Set Options...' in the Incidents list view." There is a checked checkbox "Profile the Saved Jurisdiction Set" and a text input field "Enter a short title for the optional record set being analyzed." with the value "4th Quarter 2010". At the bottom, there is another instruction: "By default the 3rd profile will include all related apparatus records. If you wish to restrict those apparatus records you may define a Jurisdiction set for the same date range in the Apparatus list view. Again, use 'Set Options...' in the Apparatus module to save the set with the name 'Jurisdiction'." and a checkbox "Use only records in Apparatus Jurisdiction Set" which is unchecked.

When the first page is complete press the "Next" button to set outliers.

Jurisdiction Profiles

Jurisdiction Profile **StatsFD** All records

Outlier Definitions

This page is used to define data outliers. Records falling outside limits set here will not be used for performance measurements.

Exclude Record Outliers as Below

Call Processing Outliers Exclude Zeros as Outliers Time Limit Exclude if Outside Time Limit

Turnout Time Outliers Exclude Zero Outliers Time Limit Exclude if Outside Time Limit

Travel Time Outliers Exclude Zero Outliers Time Limit Exclude if Outside Time Limit

Dispatch to Arrival Outliers Exclude Zero Outliers Time Limit Exclude if Outside Time Limit

Call to Arrival Outliers Exclude Zero Outliers Time Limit Exclude if Outside Time Limit

* Enter zeros if CAD times are not available for Turnout & Travel Time calcs.

Press the Next button again enter second goals for the arrival of Engines, EMS, Ladders and Others. These goals are used to compile compliance reports precisely measuring your fire departments ability to meet its goals.

Jurisdiction Profiles

Jurisdiction Profile **StatsFD**

Performance Goals

This page is used to define performance goals for compliance measurements. Goals entered in minutes will automatically be converted to seconds.

Call Processing Goal

Extra Turnout Seconds

	Engines	EMS	Ladders	Others
Turnout	<input type="text" value="90"/>	<input type="text" value="90"/>	<input type="text" value="90"/>	<input type="text" value="90"/>
Travel	<input type="text" value="240"/>	<input type="text" value="240"/>	<input type="text" value="480"/>	<input type="text" value="240"/>
Dispatch to Arrival	<input type="text" value="330"/>	<input type="text" value="330"/>	<input type="text" value="570"/>	<input type="text" value="330"/>
Call to Arrival	<input type="text" value="390"/>	<input type="text" value="390"/>	<input type="text" value="630"/>	<input type="text" value="390"/>

Set Extra Seconds for These Hours

Enter 2-digit hours, 00 - 23.
Example: 00 adds seconds from midnight to 01:00.

Hours

Number of Seconds to Add:

District Field
 Station + District Field
 CAD Map Page Field
 CAD FDZ Field

(Districts may be loaded from the NFIRS 5 District field or from the Incident Map Page or FDZ fields loaded via CAD Data.)

Current Profile New Profile Title

You can select whether you want **StatsFD** to populate the District function with District data, a combination of Station & District field data, CAD Map Page data or data from the CAD Fire Demand Zone (FDZ) field.

The "Addresses" module tracks multiple calls to the same address. You can set the threshold for the number of calls required to generate an "Addresses" record.

The Current Profile title is listed on the left. When the selection of incidents changes a new profile title should be entered on the right.

Press the "Profile" button to begin all the necessary calculations.

When profiling is complete leave Incidents. At the Operations Window press the "Jurisdiction". You will now see new performance matrices available in Departments, Stations, Districts, D3 Districts and Vehicles.



Press the "Departments" button to view performance matrices for your department. If you have the multi-FDID version of StatsFD you should see a set of performance matrices for each fire department.

Press the "Stations" button to view performance for each station. Do the same for "Districts" and "D3 Districts".

If you wish to copy a particular matrix into Presentation use the "roll-over" buttons under the matrix. For example, click on "Save as Presentation" if you wish to copy the matrix into Presentations.

Edit Title
Discussion

Capture
Copy Page to PDF

Print Landscape to PDF
Print Portrait to Printer

[Save as Presentation](#)



If you press the "Addresses" button you will see all multi-response addresses with a complete response history for each address.

The "Vehicles" button offers Demand and Distribution performance for each vehicle.

Finally, the "Members" button will record the response of fire department members to selected incidents.

Remember, you must have loaded NFIRS 5 Incident and Apparatus data to see Vehicles and Member data.

StatsFD is now capable of printing hundreds of pages of matrix statistics with the press of a single button. Make sure you have the capability to print to PDF. Do not attempt to print PDF matrices to paper. To save ink and printer toner always use the "Portrait" option when you wish to print matrix information to paper.

If you don't have a "Print to PDF" print driver installed on your system do an Internet search for "PDF Creator". It's a free application that will install a PDF print driver on your PC. You may use the driver with all applications including **StatsFD**. Here are some tips for using this PDF application:

1. If you don't want to install an extra Internet "Tool Bar" make sure you deselect the tool bar option during "PDFCreator" installation.
2. After installation you may want to adjust your print settings to keep your printer as the "default" printer.
3. When printing PDF documents in **StatsFD** make sure to select the PDF driver when the print options dialog appears.
4. With this upgrade PDF publishing opens a new world for the publishing and distribution of performance statistics. The landscape are not designed for printing. Instead these matrices are designed to display in PDF on the desktop, the iPad, the iPhone, the iPod Touch and on Android devices.

You must run the Jurisdiction Profile before you will be able to print a Jurisdiction report. After you've run the profile press the "Jurisdiction" button. Select the "Jurisdiction Reports" tab.

Follow the instructions on the screen.

Once you have completed a Jurisdictional profile you can create statistical data in the form of spreadsheets and maps. Here's how it works.

Click on one of the tabs at the top of the Jurisdiction dialog. Here we've clicked on Distribution Spreadsheets and Maps. Follow the instructions on the screen to identify 90% Travel Time by Station.

Jurisdiction **NFIRS 5 Alive**

Select | Jurisdiction Reports | Demand Spradsheets & Maps | Distribution Spreadsheets & Maps | Distribution / Shifts Spreadsheets | Concentration Spreadsheets

Distribution Spreadsheets & Maps

This area extracts data for an Excel spreadsheet and plots a selected field onto KML maps.

1.) Begin by selecting the profile you wish to analyze::

All Incidents
 Fire & EMS - No Aid
 Jurisdiction Set

2.) Select one table to rank:

Department(s)
 Stations
 Districts
 D3_Districts
 Vehicles

Min. incident count to print:

3.) Select comparison field:

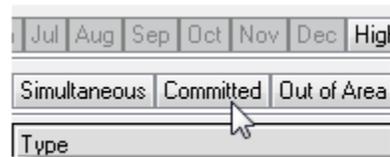
Title	# of Incidents	90% Travel
Vehicle R1	2,865	03:30
Vehicle E3	1,513	03:15
Vehicle R2	1,366	03:34
Vehicle E1	1,043	03:00
Vehicle E2	588	05:20
Vehicle T4	297	04:10
Vehicle B1	208	04:30

Load Clipboard
Save HTML

You can order by any column by simply clicking on the button at the top of the column you wish to sort. At this point you can load the clipboard to transfer the 90% travel time data to a spreadsheet or press the Save HTML button to create an HTML document that puts the data on the web.

To map 90% travel time data simply press the "D3_Districts" radio button and then reselect "90% Travel" in step #3. You will now see a "Plot D3 Comparisons to D3 Map" button. Press the button and a KML file will be created for viewing in Google Earth or other KML enabled software.

4.8 Committed Analyzer

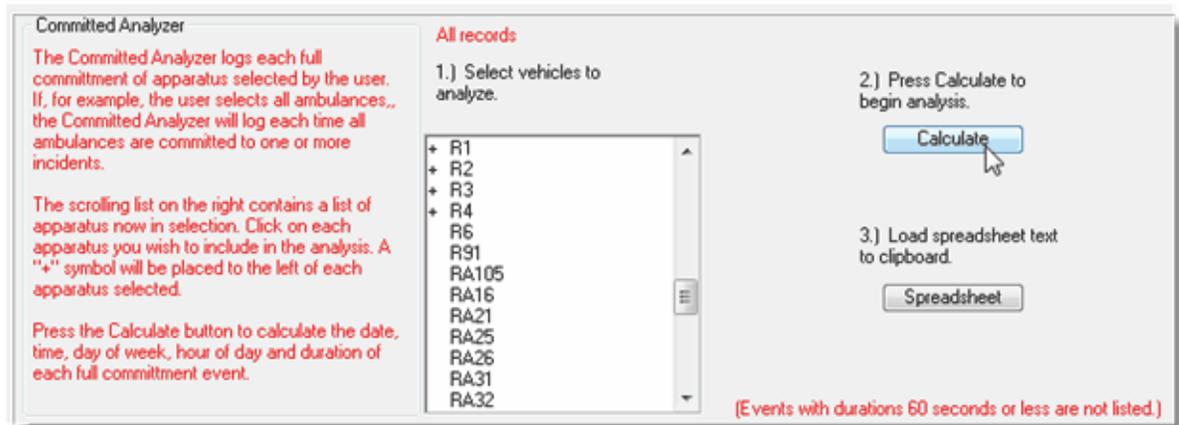


Committed Tab

The "Committed" function determines the dates, time and duration each apparatus in a select of apparatus are ALL involved in incident activity. Here's how to use this new function.

At the Operations Window press the Apparatus button. Select Apparatus records for a year, or quarter or any time period you wish.

Click on the "Committed" tab. When the page opens select the Apparatus ID of the apparatus you wish to track. Here we want to see how often R1, R2, R3 & R4 were all involved in incident activity.



Press the "Calculate" button to see the results. You may copy the results to a spreadsheet for display and further analysis.

4.9 Out of Area Analyzer

Out of Area Juris. Profile

If you go to the Apparatus list view you will see an "Out of Area" tab. Use this tab to calculate and store indicators the Apparatus response was outside a vehicle's station area or first due response districts.

After you press the tab make sure the vehicle station information is correct and up to date. If in doubt, you should also check to make sure you have accurately entered first due district data for each Vehicle. Remember, you enter the Vehicles area by pressing the Jurisdiction button and then by pressing the Vehicles button.

To perform the Out of Area calculation:

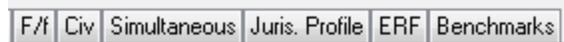
1. Open the Apparatus list view.
2. Click on the Out of Area tab.
3. Press the "Recalculate" button.

Once you have recalculated press the Search button to locate "Out of Area" apparatus responses you require.

Two fields will be populated with either a "1" for out of area or a "0" for not out of area:

OutofAreaStation
OutofAreaDistrict

4.10 Locate ERF Incidents



The "ERF" tab allows you to establish and update Effective Response Force criteria both by the following methods:

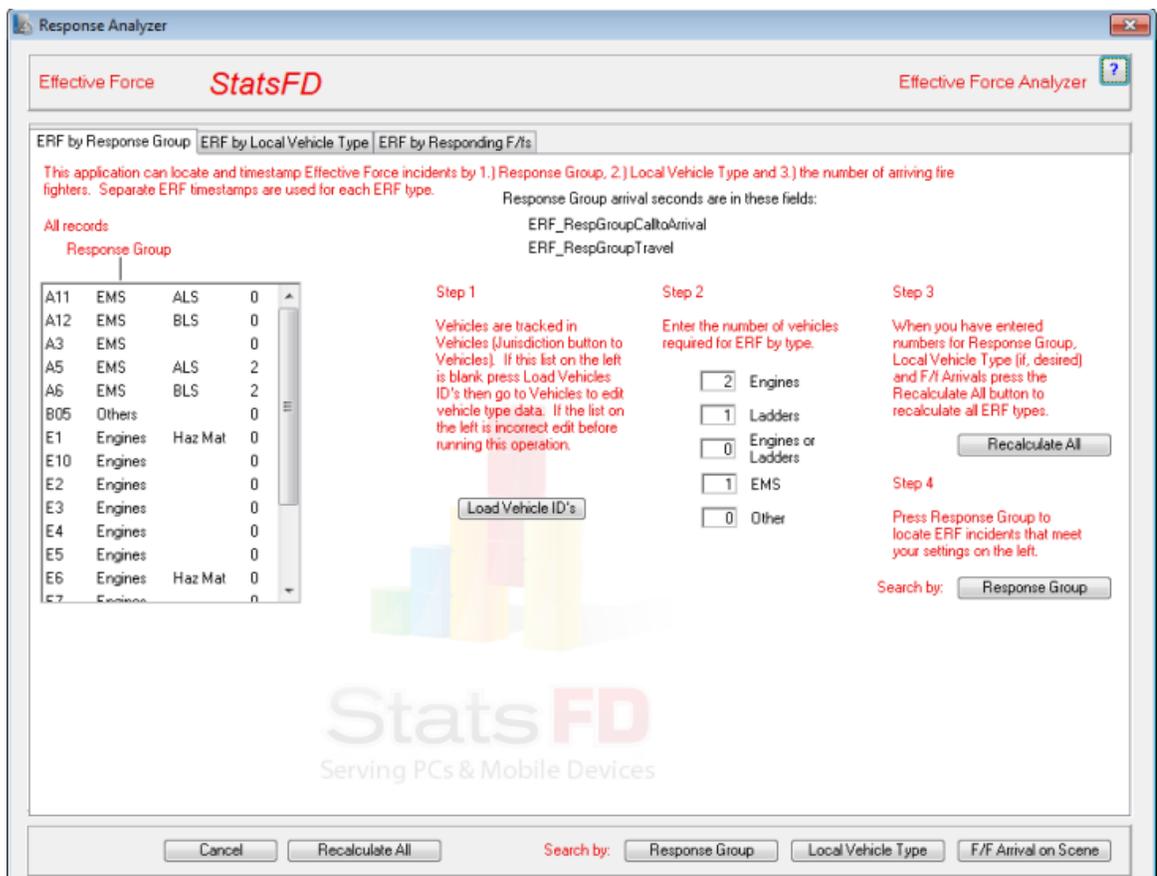
- Response Group
- Locally Defined Vehicle Type
- Arrival of Personnel

Here's a video that shows you how to run an ERF analysis:



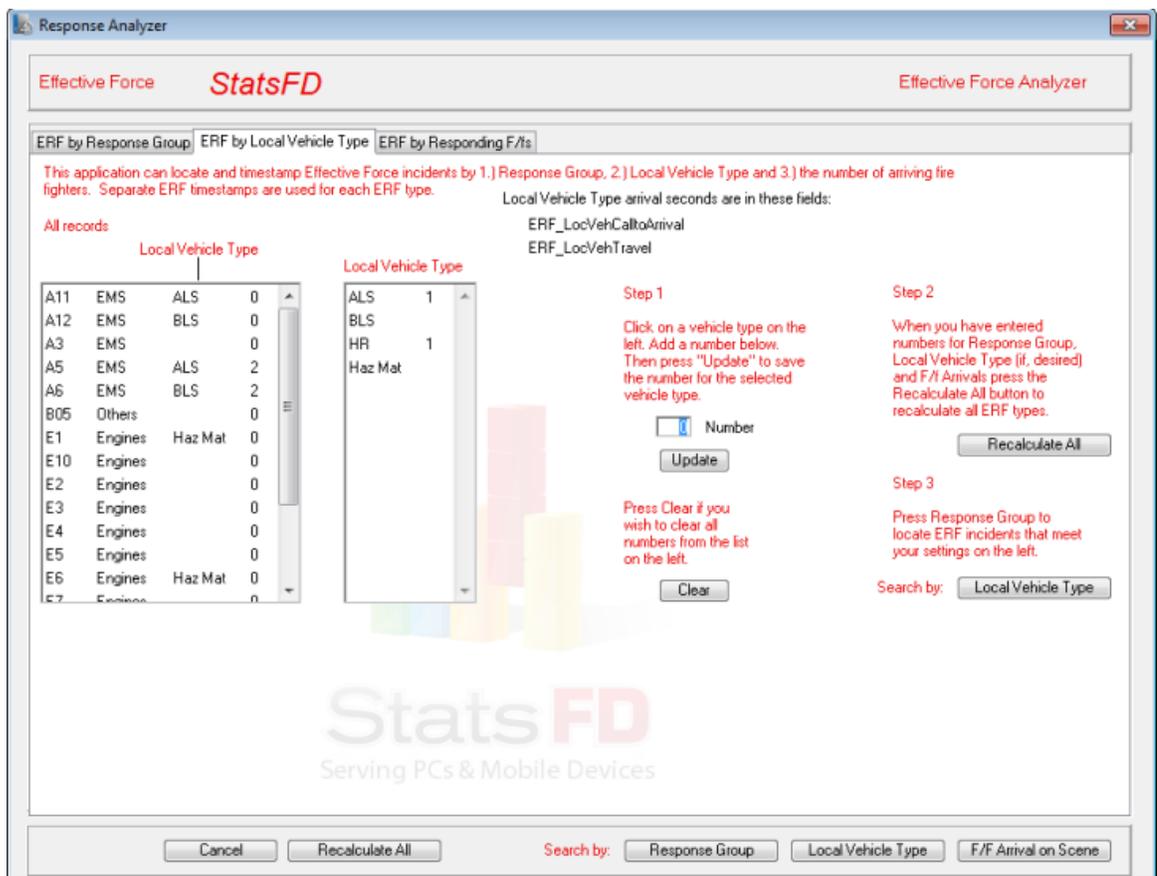
Here's how to calculate ERF by Response Group:

1. Make sure you have assigned Vehicles to an "Engine", "Ladder", "Engines or Ladders", "EMS" or "Other" response group. You do this from the Operations window by clicking on the Jurisdiction button then selecting Vehicles. Open each vehicle and press the "Settings" tab. Select a response group for each primary apparatus.
2. Open the Incidents list view.
3. Click on the "ERF" tab.
4. Click on the "ERF by Response Group" tab.
5. Follow instructions on the screen.



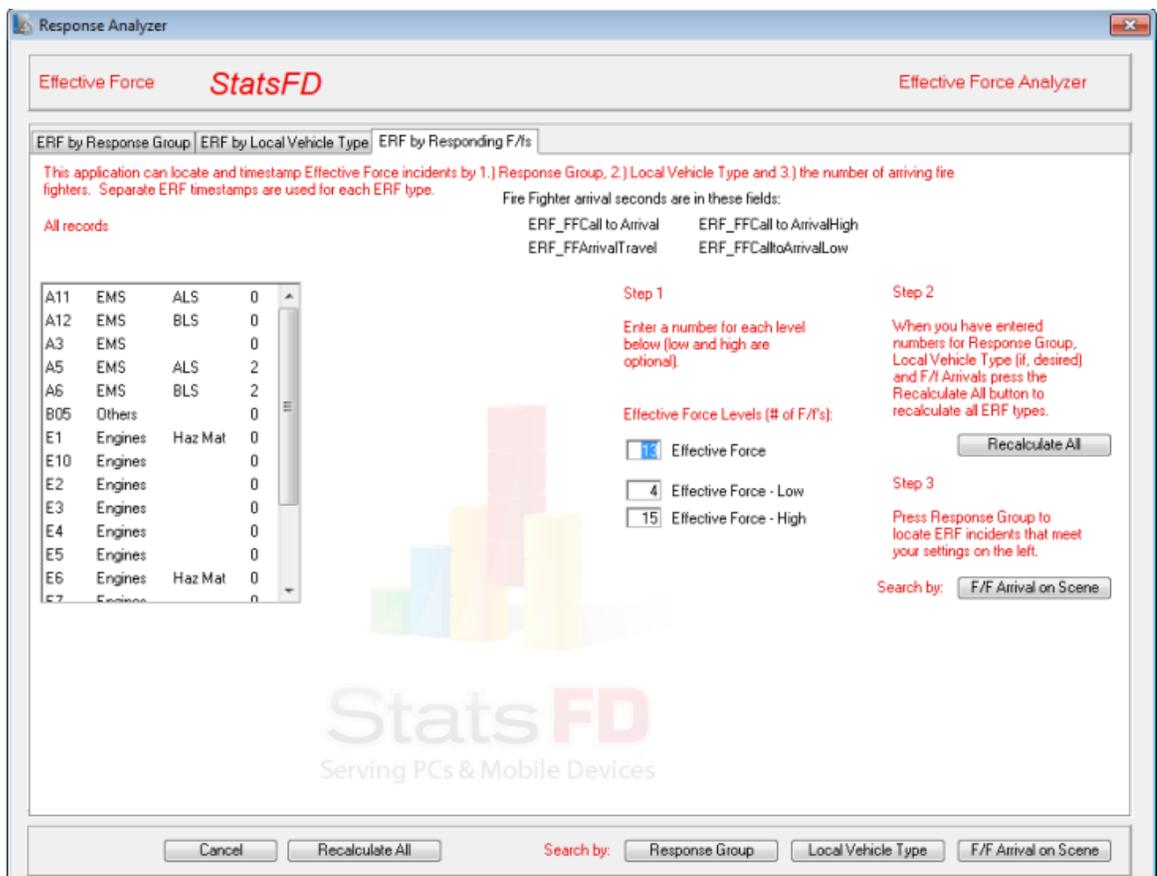
Here's how to calculate ERF by Locally Defined Vehicle Type:

1. Make sure you have assigned the Local Vehicle Types you wish to use. You do this from the Operations window by clicking on the Jurisdiction button then selecting Vehicles. Open each vehicle and press the "Settings" tab. Select enter a local vehicle type for each primary apparatus.
2. Open the Incidents list view.
3. Click on the "ERF" tab.
4. Click on the "ERF by Local Vehicle Type" tab.
5. Follow instructions on the screen.

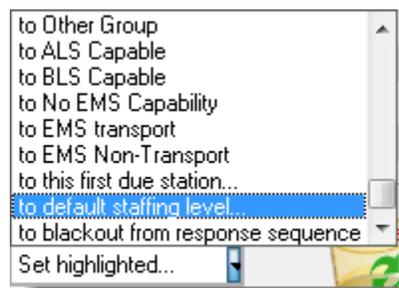


Here's how to calculate ERF by Responding F/fs:

1. Open the Incidents list view.
2. Click on the "ERF" tab.
3. Click on the "ERF by Responding F/fs" tab.
5. Follow instructions on the screen.



NOTE: If your NFIRS 5 or CAD data does not record the number of personnel responding with each Apparatus record, you can go to the Jurisdiction button and press the Vehicles button. Each vehicle allows you to enter a default staffing number. You can speed the process from the Vehicles list view. Highlight Vehicles with default staffing of 4, for example. In the lower part of the screen select "default staffing level". Enter the number 4 when request. Repeat until all vehicles have a default staffing levels.



Finally, press the "Load Default Staffing" button to copy the default staffing levels

into each Apparatus record. You may choose to replace only apparatus staffing levels of zero or globally enter default staffing levels for each apparatus response to an incident.

4.11 Benchmarks & Baselines

Run a Series of Benchmarks & Baseline Reports

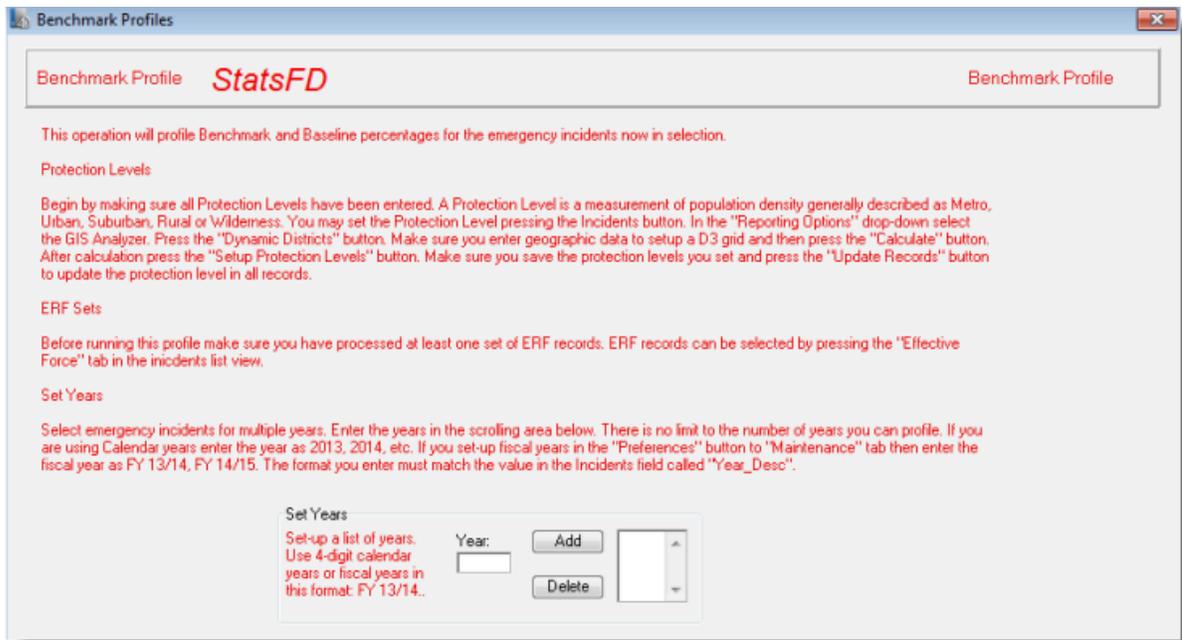
StatsFD's "Benchmarks & Baselines" function addresses a new accreditation requirement that calls for distribution and concentration analysis based on population density. Measured densities are categorized as Overall (all densities), Metro, Urban, Suburban and Rural.

Here's a video that shows you how to create a fractile reports using the Time Analyzer:

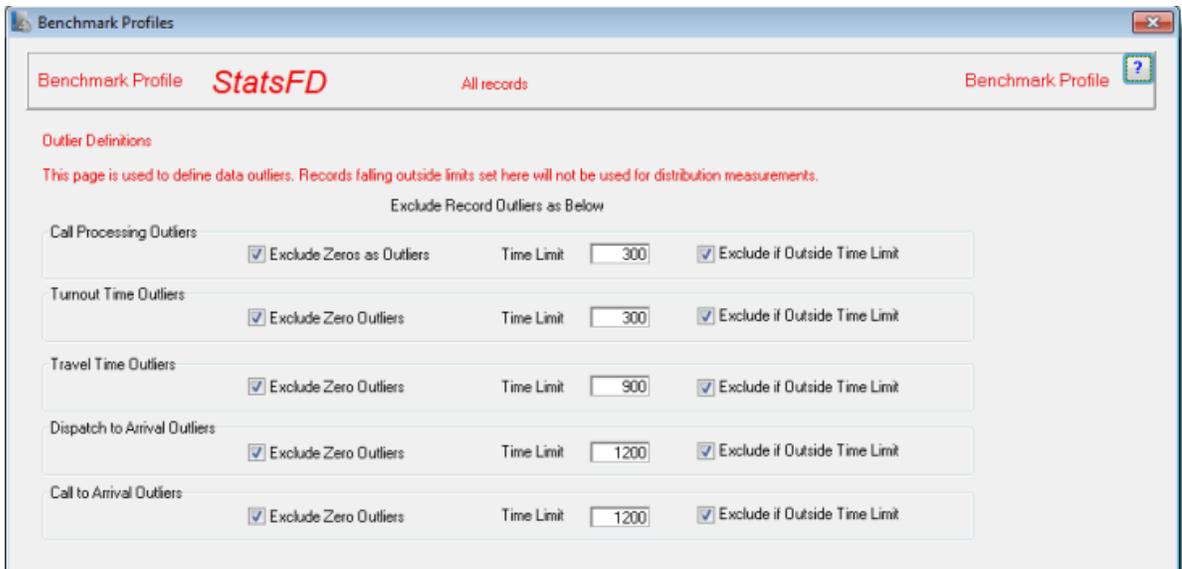


At the Operations Window press the Incident button. Press the "ERF" tab and make sure you have at least one type of "ERF" defined. Leave "ERF" and press the "Benchmarks" tab.

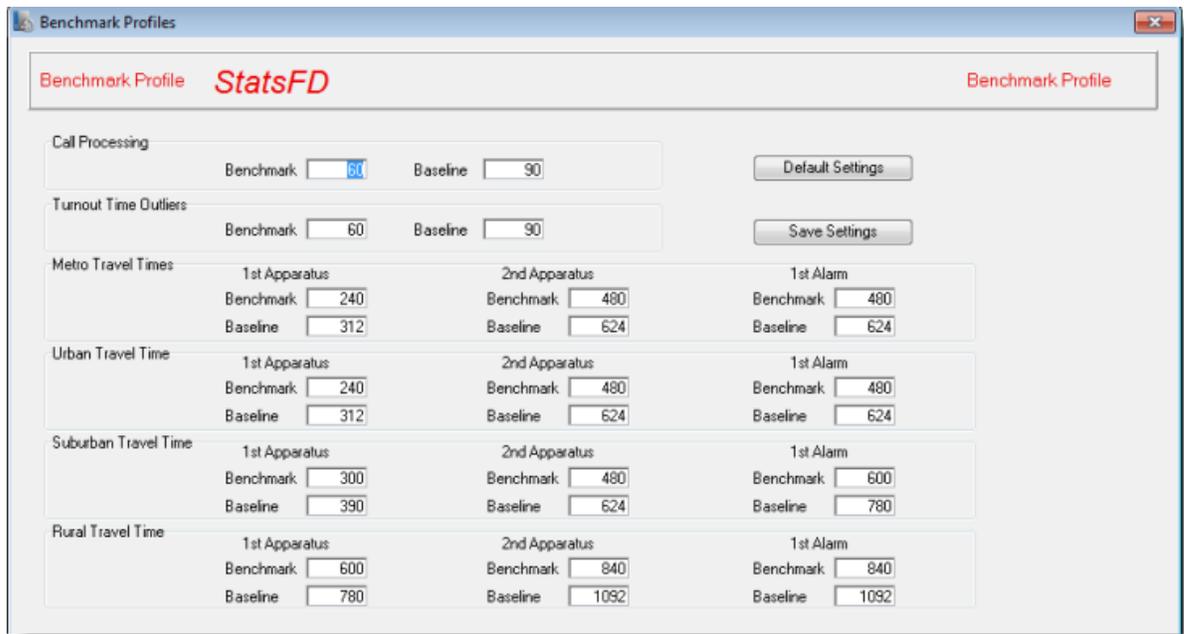
The first page explains the function and allows you to enter the years you want to analyze. Normally, Benchmarks and Baselines calculations are required for multiple years. Enter the years and then press the "Next" button.



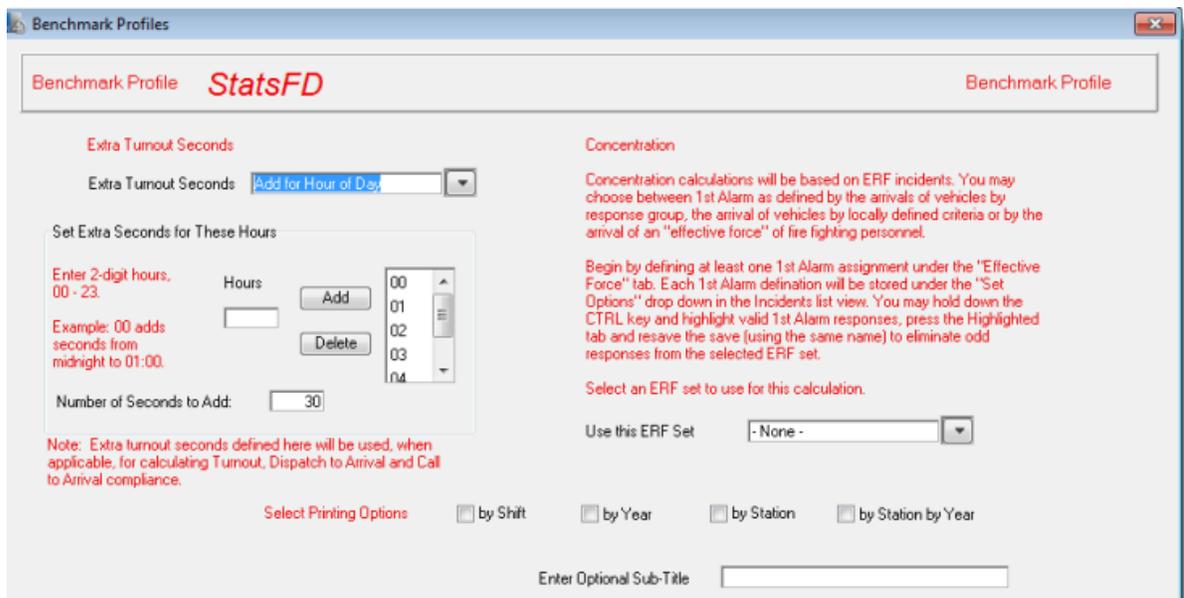
The second page displays your default outliers. Confirm or edit these outliers then press the "Next" button.



The third page displays default goals. Confirm or edit these goals then press the "Next" button.



The fourth page allows you to enter Turnout second modifications by hour of day or by incident type. Once that's done you can select the ERF set you wish to use for the distribution analysis. Check the check box below to analyze by Shift, by Year, by Station and / or by Station by Year. Each report can create hundreds of measurements. When entry is complete press the "Profile" button to create your report.



4.12 Setup Risk Analysis

Overview of Risk Analysis Module

Risks are manufacturing plants, businesses, nursing homes, hospitals and other facilities of significant value to the community. Every fire department needs to maintain a solid risk inventory and every risk inventory needs to include a flexible scoring system to assure risks with high value and/or high vulnerability are given more attention than low value / low vulnerability.

StatsFD Version 13 simplifies risk management. Users can now create, score, distribute, edit and merge risk data with a minimum of time and expense.

By selecting a single menu item **StatsFD** will now "data mine" all existing incidents for potential risks. Risks are automatically created with an incident history that includes 90% Call to Arrival and 90% Travel Time seconds. A user-defined scoring system allows you to set priorities while user-defined hazard check-boxes make short work of classifying risk hazards.

The best way to begin using the Risks module is to have **StatsFD** "data mine" incidents for Risks.



Creating Risks

At the Operations Window press the Incidents button. Press the "No Aid Given" tab to eliminate out of jurisdiction incidents. Then under the "Exporting / Merge" Options drop down select "Create Risks from Incidents". **StatsFD** will then "data mine" incidents to automatically create or update Risks.

Here's a video that shows you how to create Risk records:



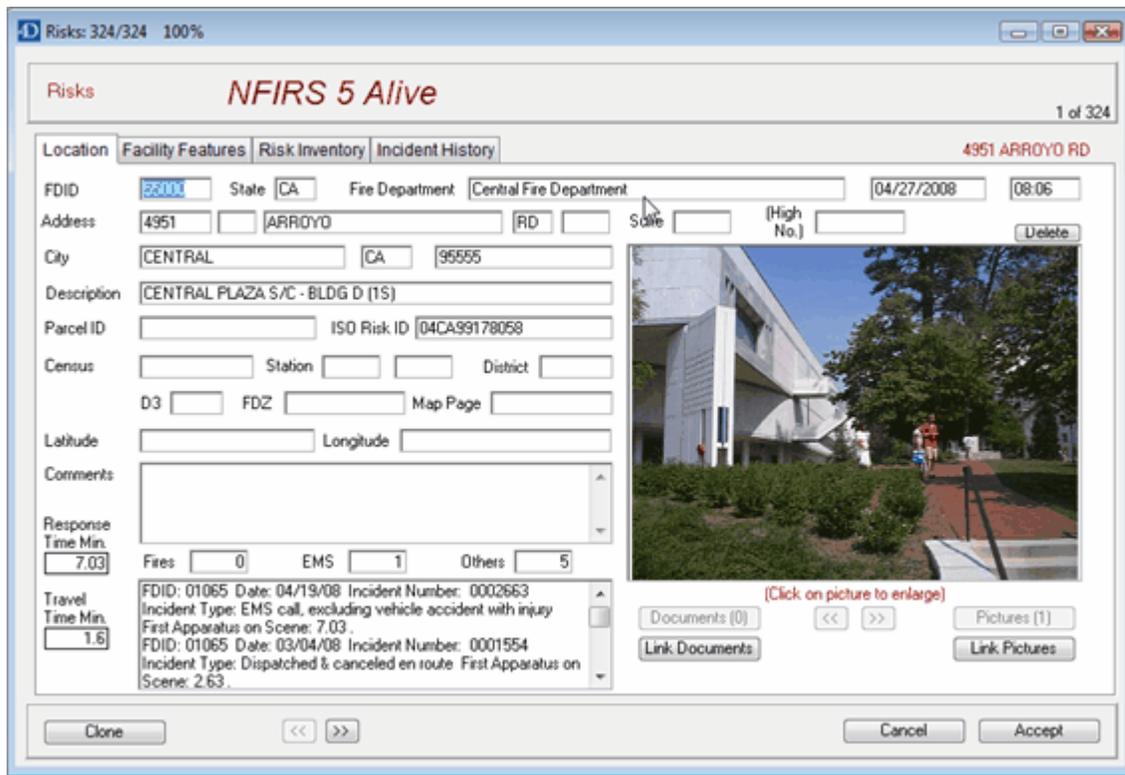
Risks will be created automatically. To view the risks you've created press the "Done" button and then press the "Risks" button.

To order risks by the number of incidents click the bar in the upper right corner of the list view:

Select Field	# Inc.
	16
	14
	13
	12
	11
	11
	11
	11

Risks with the most incident activity will move to the top of the list. To open a risk simply double-click on it. Look through a few risk records to see the data available and the layout.

Once risk records have been loaded you may go to the Pictures module and add any pictures you wish to add to the risk.



Simply load your pictures in the Pictures module then link them to the risk.



Risk Scoring

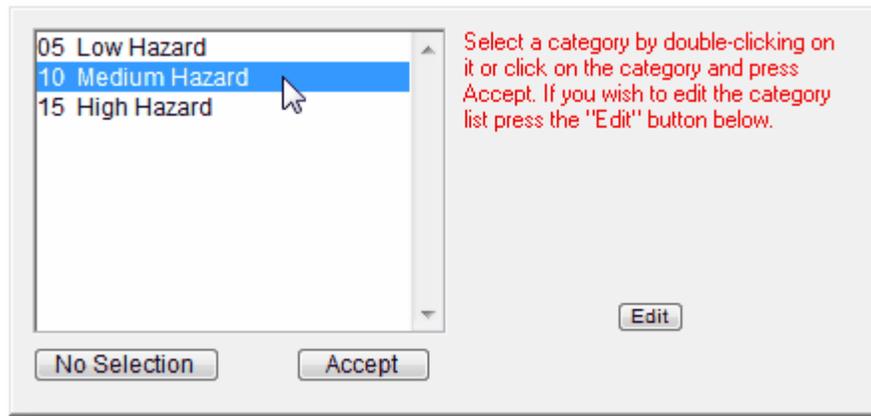
Return to the Operations Window (the main screen). Press the Preferences button. Press the Risks tab. Pictured above is five of the ten available user field options. Type a title to activate the field. Begin your field title with a ">" if you wish to add a pop-up list as a data entry option for the field. It's the pop-up lists that will hold your field scoring information.

Here's how the above entries in Preferences look when viewed from a risk record.



Notice the entries with the ">" character have a drop down list icon associated with the user field.

Click on one of the drop down list icons to see how it is setup. Here's an example:



This user-field does scoring. To select a category and score simply double-click on your selection.

Press the Edit button to edit, add or delete list selection options. Notice how this scoring field is setup. There's a one or two digit number (the score) followed by TWO spaces and a description. Make sure you press the "Save" button to save your changes.

Once you have setup a user field the score will be extracted from the selected list item and added to the overall risk score. The risk score is automatically updated each time a selection is made.

Scoring not only works with the 10-user defined selection fields, but also with the four pre-defined drop down lists pictured below:



This provides a total of 14 drop down fields that can be used for risk scoring.

When editing the pop-up selection list simply enter a number followed by two spaces

and a description to create field scoring. Or simply ignore numbers and enter a list of simple descriptions for selection.

The screenshot shows the 'Risk Inventory' tab in the StatsFD application. It features a list of checkboxes for various hazards, organized into two columns. The first column includes: Hazardous Chemicals, Radiological Hazard, High Rise Structure, Confined Space, High Angle, Water Rescue, Entrapment Possible, Terror Threat, and Long Travel Time. The second column includes: Interface, Landslide, Sun Exposure, and Freeze Area. A red text box in the lower right corner of the window reads: "User defined risks are managed in Preferences. At the Operations window press the Preferences button and then press the 'Risks' tab. Enter a names for each risk you wish to track. Once entered in Preferences the named risks will appear in this data entry area." A mouse cursor is visible near the bottom right of the window.

Hazard Checkboxes

StatsFD has nine pre-defined hazard checkboxes. Those checkboxes are seen in the first column above.

An additional 15 hazard checkboxes may be defined under the Preferences button to the Risks tab.

To enable a checkbox just put a title in the appropriate field seen below. You make a user-defined checkbox disappear by simply removing the title.

You may add up to 15 user defined risks to the Risks module. Give thought to the Risks you wish to include. Add only important risks - those you wish to track for each occupancy in your jurisdiction. Adding a risk name to any of the fields below activates a new Risk category. Removing a risk name removes the risk category. Risks are tracked by UDF field number. Moving a name to a new field location does not automatically move risk data to that new location.

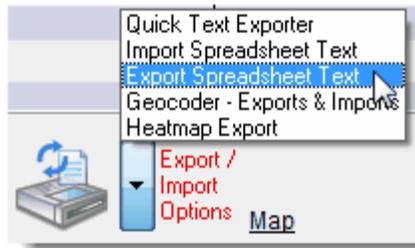
Risks UDF 01	Interface	Risks UDF 06		Risks UDF 11	
Risks UDF 02	Landslide	Risks UDF 07		Risks UDF 12	
Risks UDF 03	Sun Exposure	Risks UDF 08		Risks UDF 13	
Risks UDF 04	Freeze Area	Risks UDF 09		Risks UDF 14	
Risks UDF 05		Risks UDF 10		Risks UDF 15	

(Enter the field name "EraseData" to erase all risk data previously entered in that user defined field.)

GIS Analysis of risks begins with geocoding the risks.



Select the "Geocoder" from the Export / Import Options button. This area will provide instructions for geocoding using web services.



Editing & Adding Risks

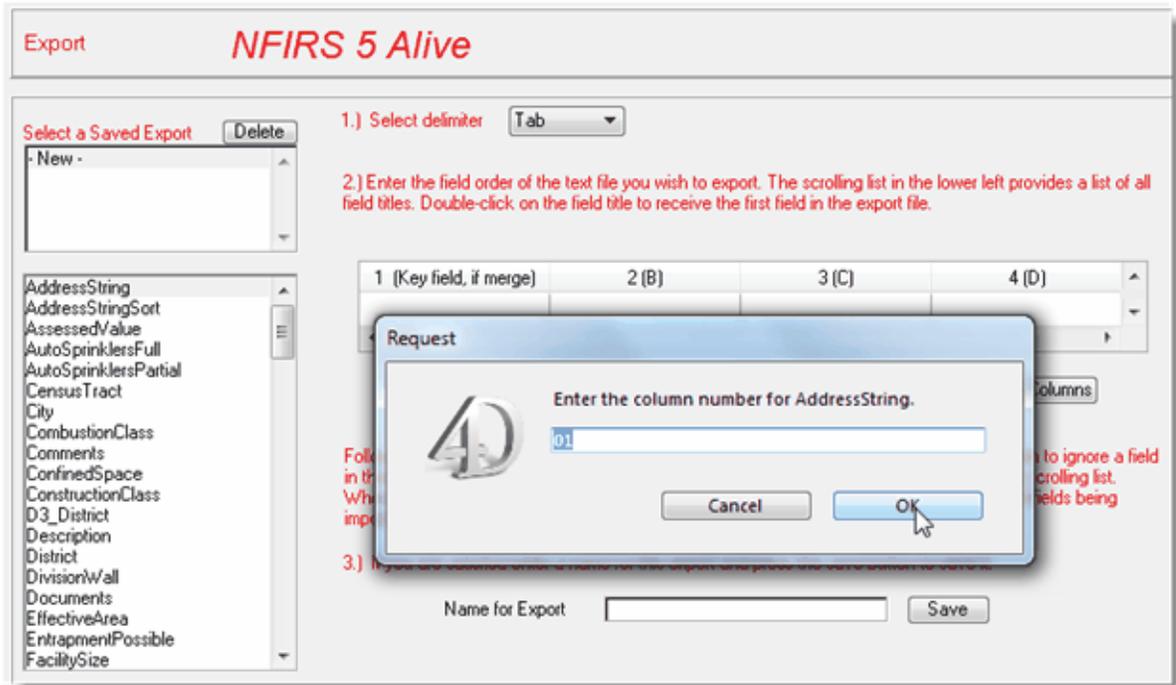
Here's a video that shows you how to export and import Risk records:



To edit a risk just double-click on a risk in the Risks list view. You may add a new risk by pressing the "New Record" button and completing the form. This works well for a small number of minor edits. But when you wish to add or enter hundreds of records there is an alternative.

Under the Export / Import drop down list select "Export Spreadsheet Text".

The next screen contains a list of fields on the left. Begin by clicking on "-New-" in the upper left box. Since "AddressString" is the key field for Risks (key fields identify unique records) make sure "AddressString" is the first field selected by double-clicking on it. Next press OK in the dialog that appears to confirm the selected field has been assigned to column 01 of the export. Continue by selecting all other fields in a similar manner. Remember to include every field you wish to track whether or not the field yet contains any data.



Be sure to include the five “Street” fields:

1. StreetNumber
2. StreetPrefix
3. StreetName
4. StreetSuffix
5. StreetType

Remember, each of these fields is used to construct the key “AddressString” field.

When all fields have been selected enter a name for the export you’ve created and press the “Save” button to save the Export.

As part of the same operation you will be asked if you wish to automatically create and save an import format of the same name. This is valuable since the same format must be used to import records you edit in a spreadsheet.

Now press the button to “Export to Clipboard”. Accept the option to make the first row of the spreadsheet you column header titles. This option will put field titles at the top of each spreadsheet column.

3.) Press the Export to Clipboard button to load the clipboard with a record export.

Export to Clipboard

Wait for the export process to load your clipboard. When the process is complete paste clipboard data into cell A1 of your spreadsheet. You may now edit all of your risks on the spreadsheet.

Remember to enter the same selection choices in the spreadsheet that you entered into **StatsFD**. This means all scored fields in the spreadsheet should be in the “number-space-space-description” format.

In spreadsheet programs such as Excel you may sort entries by station and divide the spreadsheet into station areas. Each station commander can then be responsible for completing the Risks within their station area. All they need is a copy of Excel.

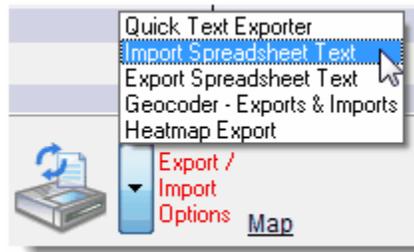
Once complete the returned spreadsheets can then be reassembled and imported into **StatsFD**.

	A	B	C	D	E	F	G	H
1	AddressString	Description	StreetPrefix	StreetNumber	StreetName	StreetType	StreetSuffix	Suite
2	365 Adams			365 Adams				
3	600 Adams	Jackson Auto Body		600 Adams				
4	626 Adams			626 Adams				
5	764 Adams			764 Adams				
6	800 Adams			800 Adams				123
7	940 Adams	Harris Drug Store		940 Adams				
8	1150 Adams			1150 Adams				
9	1206 Adams			1206 Adams				
10	1237 Adams			1237 Adams				
11	1478 Adams			1478 Adams				
12	1905 Adams			1905 Adams				
13	2080 Adams	King's Hardware		2080 Adams				
14	145 Adams AVE			145 Adams	AVE			123
15	764 Adams AVE			764 Adams	AVE			
16	800 Adams AVE			800 Adams	AVE			123

Importing Edited Records

When spreadsheet edits are complete you are ready to import. Select and copy the risk data making sure not to select the first row that contains the column titles.

Inside **StatsFD** select “Import Spreadsheet Text”:



Select the import name you created when you created your export.

Import / Merge **NFIRS 5 Alive**

Select a Saved Import Delete

- New -
- ISOImport
- Testing01**

1.) Select delimiter Tab

2.) Enter the field order of the text file you wish to import. The scrolling list in the lower left provides a list of all field titles. Double-click on the field title to receive the first field in the import file. If you wish to merge import data into existing records the first field title below **MUST** refer to the key field that uniquely identifies the record to receive the merge data.

1 (Key field, if merge)	2 (B)	3 (C)	4 (D)
AddressString	Description	StreetPrefix	StreetNumber

Ignore Column Clear All Columns

Follow on-screen instructions. Repeat, in order, for each field in the import text file. If you wish to ignore a field in the import file simply click the "Ignore Column" button instead of selecting a field from the scrolling list. When complete, the number of columns above with field values should equal the number of fields being imported from the text file.

3.) If you are satisfied enter a name for this import and press the save button to save it.

Name for Import Testing01 Save

Merge Only
 Merge & Import
 Import Only

AddressString
AddressStringSort
AssessedValue
AutoSprinklersFull
AutoSprinklersPartial
CensusTract
City
CombustionClass
Comments
ConfinedSpace
ConstructionClass
O3_District
Description
District
DivisionWall
Documents
EffectiveArea
EntrapmentPossible
FacilitySize

Click one of the three checkboxes at the bottom of the form.

“Merge Only” will locate matching records by matching AddressString. It will then merge data from the spreadsheet record into the Risks record. All new records will be ignored.

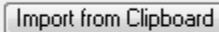
“Merge & Import” will attempt to match records for data merging. If a match is found data will be merged. If a match is not found the spreadsheet record will be imported into Risks as a new record.

“Import Only” will ignore all spreadsheet records that have a matching AddressString and it will import all records in the spreadsheet that are not found in Risks.

In general, the **“Merge & Import”** option will be the one most frequently used.

When the merge option has been set press the “Import from Clipboard” button to load spreadsheet data into the Risks module:

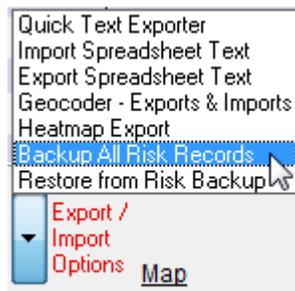
3.) Copy spreadsheet records to the clipboard and press Import from Clipboard button to import copied records.



Risk Backups and Restores

Before risk records are imported a backup is automatically created. This backup allows you to restore risks to the same state as they were before the import should the import fail to provide expected results.

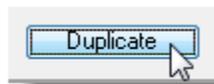
In addition to this automatic backup risk records may be backed-up and restored manually. Here’s how to manually backup risks. Select “Backup All Risk Records” from the drop down menu.



When asked provide a short name for the risk backup file. The file will be saved and available as a restore point at any time.

To restore a file simply select “Restore from Risk Backup” from the same drop down menu. You will see a list of available risk backup files. The last automatic risk backup made just prior to importing risk records will always be titled, “Risks.txt”.

Remember, when you choose to restore a risk backup all present risk records are deleted and replaced by the records in the risk backup file you select.



Multiple Occupancies – Same Address

Sometimes you may have multiple occupancies located at the same street address. If you wish to track separate occupancies at the same street address open risks. Locate the address of the occupancy.

Open the risk record for editing. On each page you will see a "Duplicate" button. Press the button and follow the instructions on the screen to create a second occupancy for the same address.

Remember, you must enter a suite for each additional occupancy. You must also keep a Risks record with the address without any suite information so all responses to the address can be tracked and analyzed for performance.

5 5. Monitor

5.



- * [Performance Trends](#)
 - * [Automatic Data Loading](#)
 - * [Set Call Priority](#)
 - * [Shift Patterns](#)
 - * [Identify Outliers & Goals](#)
 - * [Set Daily Processing Time](#)
 - * [Setup Channels](#)
-

5.1 Performance Trends

Performance Trends Overview

Performance trends are stored under the Jurisdiction button for Departments, Stations and Vehicles.



Here's a video that gives you a performance trends overview:



Performance Trends calculates demand, overall performance and performance by shift measures over the 90-days and compares it to performance over the past 7-days. This comparison allows you to determine if demand and performance is trending higher or lower.

Here's a report for Station 01. It shows distribution trends for Call Processing, Turnout, Travel, Dispatch to Arrival and Call to Arrival.

Performance Trends		Station ID: S01			8/22/2013 at 10:25
1st Apparatus Arrival Compliance		Emergency Responses Only			
Call Processing	Turnout	Travel	Dispatch to Arrival	Call to Arrival	
90.2% Compliance 90 Days	51.2% Compliance 90 Days	88.3% Compliance 90 Days	84.7% Compliance 90 Days	87.8% Compliance 90 Days	
89.5% Compliance 30 Days	52.7% Compliance 30 Days	86.9% Compliance 30 Days	82.2% Compliance 30 Days	88.2% Compliance 30 Days	
89.2% Compliance 7 Days	46.9% Compliance 7 Days	87.9% Compliance 7 Days	88.9% Compliance 7 Days	97.1% Compliance 7 Days	
-1% Change 90 to 7 Days	-4.3% Change 90 to 7 Days	-0.4% Change 90 to 7 Days	4.2% Change 90 to 7 Days	9.3% Change 90 to 7 Days	

Under the Jurisdiction button look through the trend tabs for individual Departments, Stations and Vehicles. If they are blank then you will need to run a Trend Analysis.

This chapter will take you through the steps necessary to run a trend analysis.

5.2 Automatic Data Loading

Automatic Data Loading

Once you've set **StatsFD** to monitor your operation Trend Analysis will take place automatically. Typically Jurisdictional trend analysis is updated every 24 hours.

Here's a video that illustrates automatic data loading:



There are two automatic methods to load RMS data; automatic importing of RMS files and connecting to your RMS system via ODBC. If you wish to import data files from your RMS system you must begin by testing the process manually. If it works OK you can set the process to occur automatically.

The same is true for connecting to your RMS system via ODBC. As you setup the ODBC connection make sure it is operating properly when triggered manually. If it works OK you can then set the process to occur automatically.

Automatic loading of data files from the RMS system should be considered a legacy option. The preferred method is to establish and test a READ ONLY ODBC connection to your RMS system.

5.3 Set Call Priority

How to Set Call Priority

As much as possible performance measurements should be based on emergency incidents only. Because **StatsFD** calculates performance automatically there must be a way to identify the emergency incidents to include in performance calculations.

Here's a video that shows you how to setup call priority:



Make sure your Call Priority settings are OK under the "Call Priority" tab.

If you identify call priority in a user defined field select the field name being used then enter values that represent emergency responses. If you are not importing a call priority field the best setting for you is to select the Incident Types field and designate all Fires & EMS incident types as emergencies. Other incident types will be treated as non-emergencies.

In StatsFD the "@" symbol is a wildcard so if you enter Incident Types as the field and then "1@" and "3@" that will set all incident types beginning with a 1 or a 3 as emergencies. Remember, if you have no setting no incidents will be identified as

emergencies. This means that you will get totals for demand activity, but emergency performance will be all zeros.

5.4 Shift Patterns

Identifying Shift Patterns

There are two reasons **StatsFD** needs to be able to calculate what shift is on-duty at any given date / time. The first reason is that if your RMS data does not include the shift the shift on-duty at the time of the alarm needs to be calculated and included with the Apparatus record. The second reason is so **StatsFD** can produce "end of shift" reports summarizing activity and performance for each shift as it goes off-duty.

Here's a video that shows you how to set-up shift patterns:



Instructions for completing the Shift pattern page may be found on the page itself. Remember, you must have at least two shift letters per line. The first is the shift letter working at midnight. The second is the shift coming on a first shift change.

Generally the number of days it takes a shift to repeat it's shift cycle varies from 3 to 24.

5.5 Identify Outliers & Goals

Confirm Outliers & Goals

Record "Outliers" identify records that fall outside normal operating parameters and are therefore not included in performance calculations.

Here's a video that explains Outliers and Goals:



Goals are the number of seconds it's desired to complete a specific activity. For example, the fire department may have a Travel Time goal of 240 seconds

(4-minutes). By establishing a goal you can identify the percentage of incidents that comply with the goal.

For example, a Call Processing time greater than 300 seconds (5-minutes) is a very unusual occurrence so it's ignored when calculating Call Processing performance.

5.6 Set Daily Processing Time

How to Setup Your Daily Processing Time

The Daily Processing Time is the time of day you want all trend calculations, demand & performance, to be calculated.

In general, the Daily Update Time should be set to 15-minutes before the first shift change of the day. This allows the software to complete reports for the ending shift. It also performs fresh operational calculations for the shift or staff members reporting for duty.

5.7 Setup Channels

How to Setup Channels

Channels are communications paths that allow you to direct a publish report to different locations based on the type of report or the intended recipient of the report.

Here's a video that shows you how to set channels for your reports:



Remember, you must set at least one valid Channel for StatsFD's automatic operation to start.

Channels may be set to shared folders like "Dropbox" or "Google Drive". A channel can be set to a shared folder on your server or it can be set to a remote folder that you access via FTP.

NOTE: Each of the ".html" files created by StatsFD is capable of being opened by a

web browser directly. Files do not have to be forwarded to a web server in order to viewed.

6 6. Publish

6.



- * [Setup Email Addresses](#)
 - * [Set the Schedule](#)
 - * [Select Dashboard Pages](#)
 - * [Setup Local Links](#)
 - * [Setup Auto Sync](#)
 - * [Run Mobile Reports](#)
 - * [Run Mobile Scripts](#)
 - * [Run Fast Alerts](#)
 - * [Starting the Publisher](#)
-

6.1 Setup Email Addresses

Setting-up an Email Identity and Email Addresses

StatsFD can be assigned an email identity that allows the application to send emails to people you add to the Email Registry.

Here's a video that shows how emailing works within StatsFD:



After setting-up an email identify it's a good idea to press the test button to see if you can send an email to an address you enter.

If there's an error StatsFD will tell you what it is. If there is no error, but the test email is not received, try the test again with a different SSL checkbox setting.

6.2 Set the Schedule

How to Setup the Schedule

The Daily Report Time was setup under Channels and does not have to be changed.

The "Hourly Reporting Interval" can be set to however many hours and minutes you want between reports you set to repeat on an hourly basis.

The "CAD Data Import Interval" is the interval you want the CAD table populated with data either from importing files from a folder or via a direct ODBC connection. Generally this time period is between 20 and 60 minutes.

Here's a video that shows you how to set the schedule:



6.3 Select Dashboard Pages

Select Dashboard Pages

StatsFD creates a live dashboard full of demand, distribution, shift and concentration measurements. The dashboard is typically published on the hourly schedule.

While you could send all report pages to all groups you may wish to limit the number of pages for fire fighters while enabling all pages for senior staff.

Here's a video that shows you how to select dashboard pages:



6.4 Setup Local Links

Setting-up Local Links

When **StatsFD** publishes certain HTML documents you may wish to add local links to enable quick web navigation to web sites used locally. For example, you may wish to add links to local traffic and weather radar as part of your HTML reports.

Here's a video that describes how local links work:



6.5 Setup Auto Sync

Setup Auto Sync

If you have multiple **StatsFD** installations you can automatically move newly imported data from the 24 / 7 server installation to any number of **StatsFD** installations on officer's PCs.

You have full control over the data that's exported as well as the data the individual workstations choose to import.

Here's a video that shows you how to sync data:



6.6 Run Mobile Reports

How to Run Mobile Reports

Mobile Reports allows you to set-up reports from a dozen report types:

1. An extensive color-coded "Trend Analysis" that prints in PDF.
2. A KML map that illustrates performance on a map.
3. A map illustrating the location and response times to major incidents.
4. The **StatsFD** dashboard with selected pages.
5. Performance trend gauges in HTML format.
6. Performance shift gauges in HTML format.
7. A "Missed Goals" report in HTML.
8. "Heat Map" of selected Apparatus responses.
9. Any report format captured from the "Fractile Splits" page of the Time Analyzer.
10. Any report format captured from the "Comparisons" page of the Time Analyzer.
11. Any report format captured from the "Worksheet Analyzer".
12. A sophisticated Unit Hour Utilization report in HTML format.

Here's a video that shows you how to setup Mobile Reports:



6.7 Run Mobile Scripts

How to Run Mobile Scripts

Mobile Script reports give you more flexibility when selecting records for reports. There are 5 Mobile Script report types:

1. "Heat Map" of selected Apparatus responses.
2. Any report format captured from the "Fractile Splits" page of the Time Analyzer.
3. Any report format captured from the "Comparisons" page of the Time Analyzer.
4. Any report format captured from the "Worksheet Analyzer".
5. A sophisticated Unit Hour Utilization report in HTML format.

Here's a video that shows you how to setup Mobile Script reports:



6.8 Run Fast Alerts

How to Run Fast Alerts

Fast Alerts specialize in creating reports that get sent via email or text messaging. These reports are text-based narratives. Here's a list of 4 report types:

1. Email Performance Summary.
2. Email Abbreviated Summary.
3. Email Significant Performance Change Summary.
4. Text Message summarizing Turnout & Travel Times.

Here's a video that shows you how to setup Fast Alert reports:



6.9 Starting the Publisher

Here's How to Start the Publisher

The Publisher is an automatic process that runs 24 / 7. It performs two essential functions First, it controls the automatic import of RMS data into the CAD table. Second, it publishes reports and disseminates reports on the schedule you set.

All automatic functions are controlled by the Publisher.

Here's a video that illustrates how to set-up the Publisher:



7 Utilities

7.



- * [Accessing the Security Center](#)
 - * [Verify / Repair](#)
 - * [Compact](#)
 - * [Setting-up Incident Types](#)
 - * [Global Data Editing](#)
-

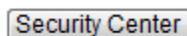
7.1 Accessing the Security Center

Accessing the Security Center

Every Microsoft Windows operating system comes with tools for backing-up, restoring, repairing and defragmenting the hard drive. These tools need to be run periodically to keep the operating system running a peak performance. The same is true for the **StatsFD** database.

With this release database maintenance tools are built-into the database. Here's how to access these tools while in the application. At the Operations window press the "Preferences" button. Click on the "Maintenance" tab. Press the "Security Center" button.

Click on the Security Center button to access 4D Tools

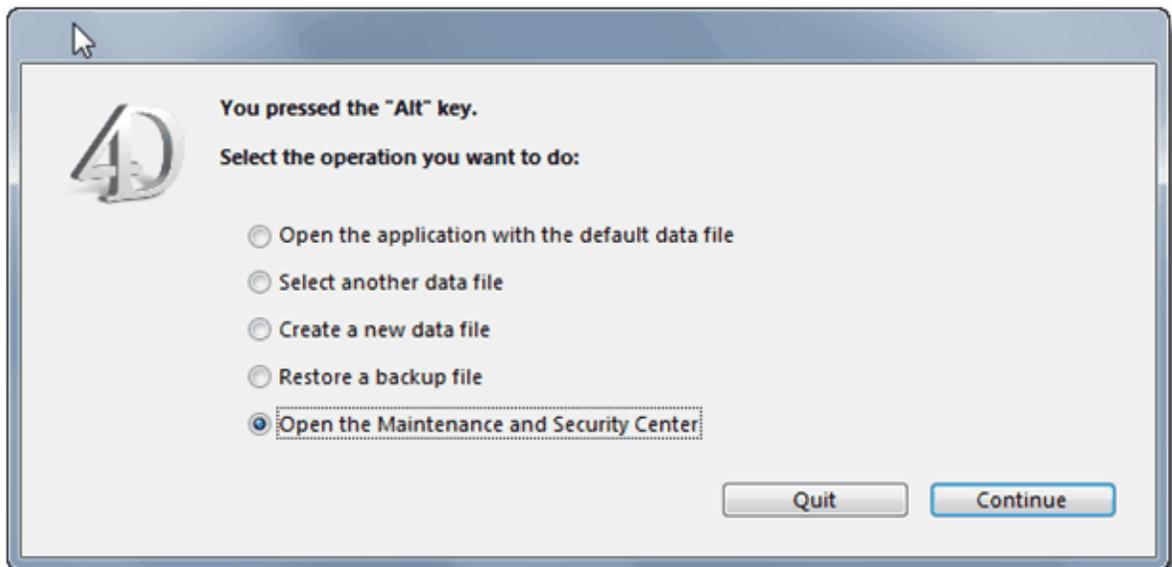


Here's a video that shows you how to access the maintenance features in the Security Center:

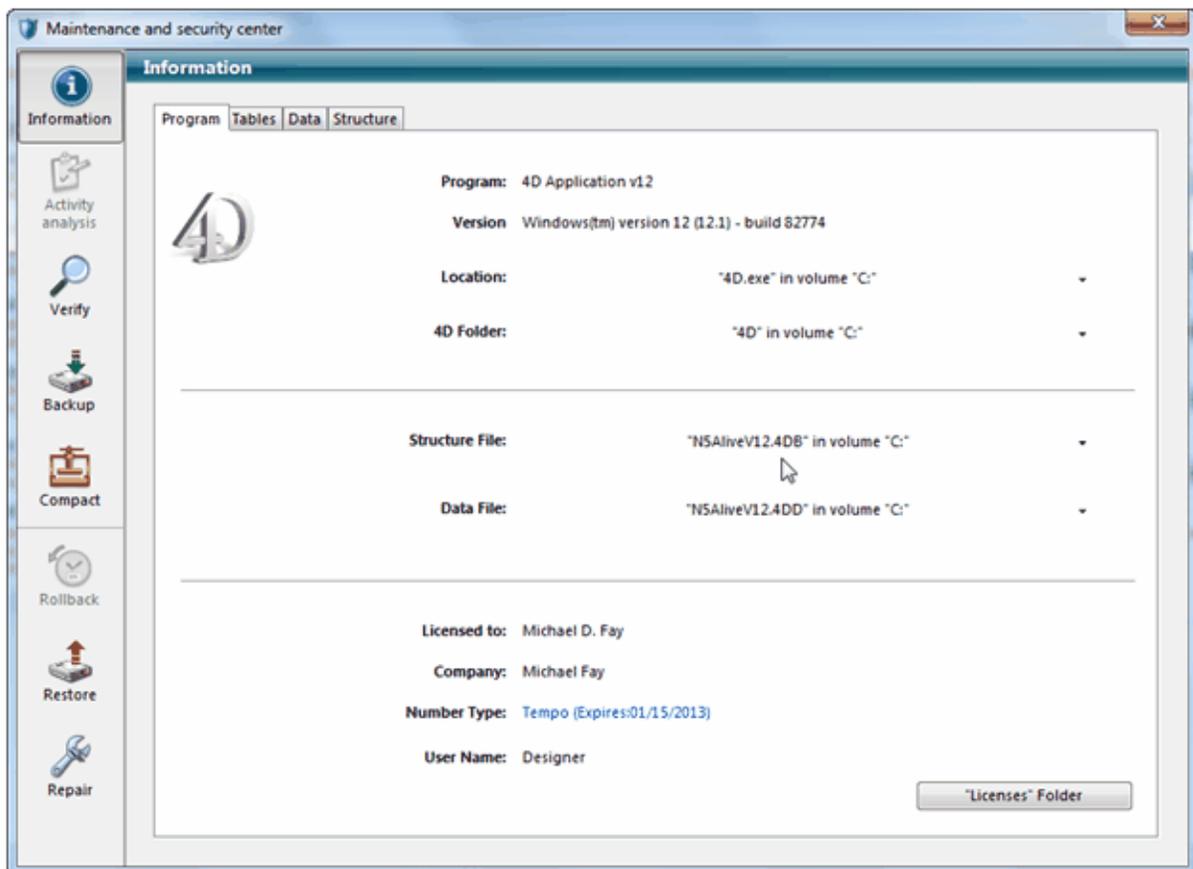


If **StatsFD** fails to start properly you have the option of opening the application in the Security Center. This allows you to repair the application and recover the data even though the database itself cannot be started. Here's how to open **StatsFD** in the Security Center:

Double-click on the “N5AliveV12.exe” executable file (or your desktop shortcut) and immediately hold down the “Alt” key on your Windows keyboard. You should see the following screen:



The main features of the application have been outlined in buttons on the left side.



You may "Verify" the database to check for possible errors. If you have a problem with your data you can "Repair" the data file.

The "Backup" button will backup the database while the "Restore" button restores the backup.

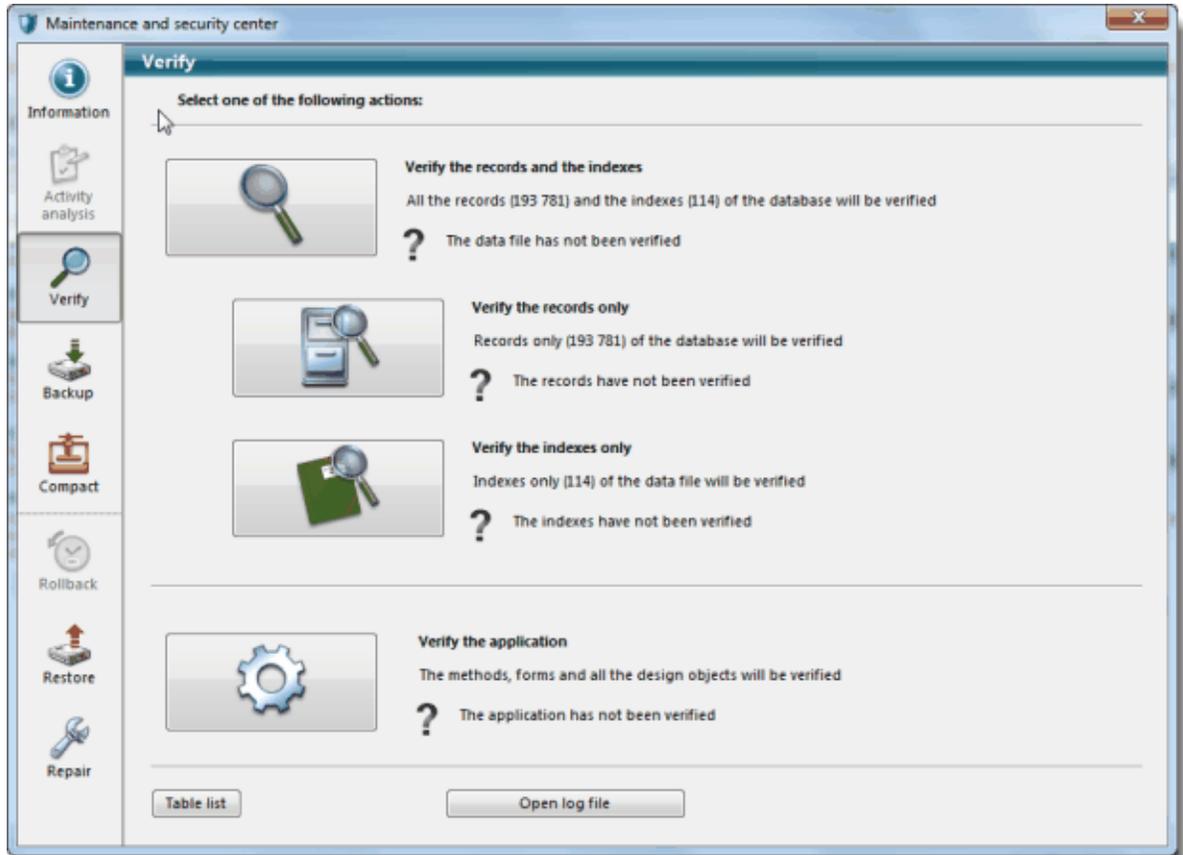
The "Compact" button will simultaneously backup and compact the data file to improve speed.

Unlike older versions of 4D Tools this new version will handle all file switches automatically. It is no longer necessary to change file names and reopen the application. Just follow the on screen instructions and 4D Tools takes care of the rest.

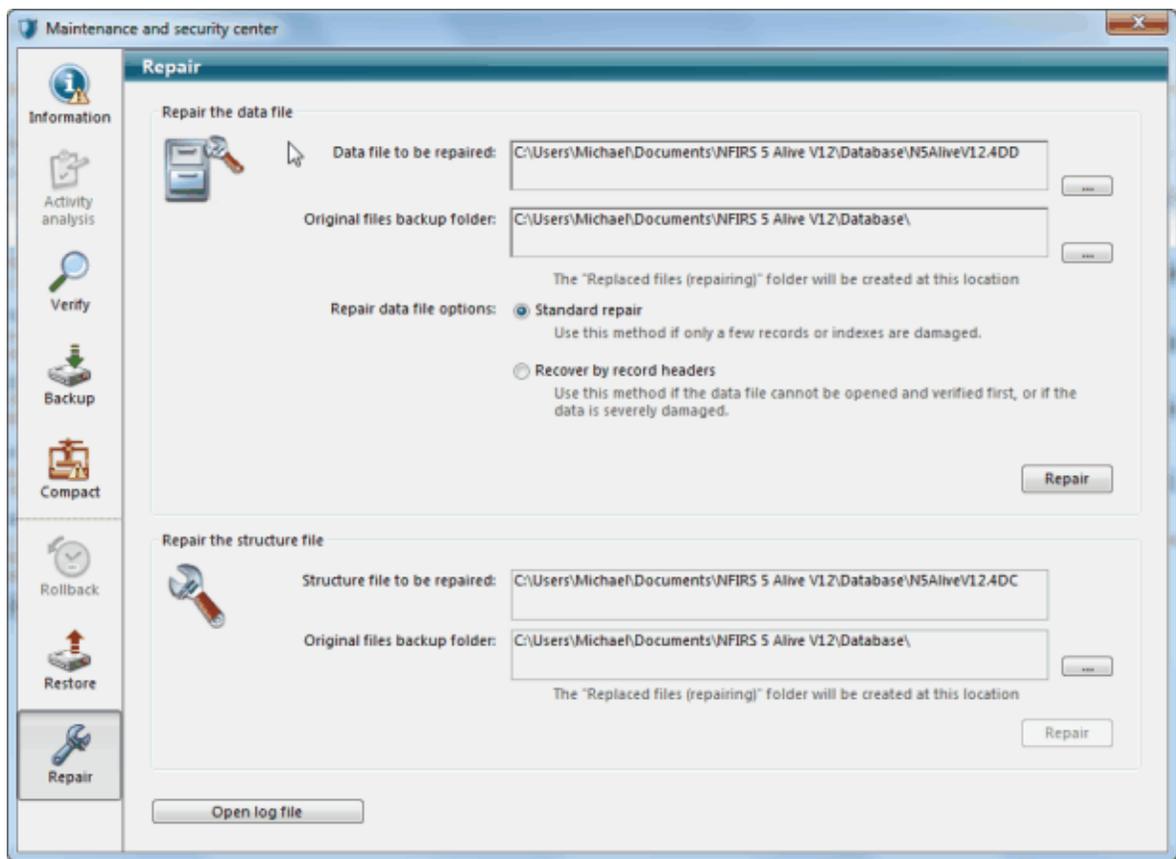
7.2 Verify / Repair

Verifying and Repairing the Data File

When you press the "Verify" button you have the ability to check records as well as the database application. Use this function to identify problems with your data or application files.



If you identify a problem then press the "Repair" icon. Here are your repair options:



Notice the Security Center tells you where your structure and data files are located. This is a help if you have installed multiple copies of the application and are confused about which copy you are using.

Generally, it's best to begin with a "Standard repair". If there is serious damage you will be advised to move to "Recover by record headers".

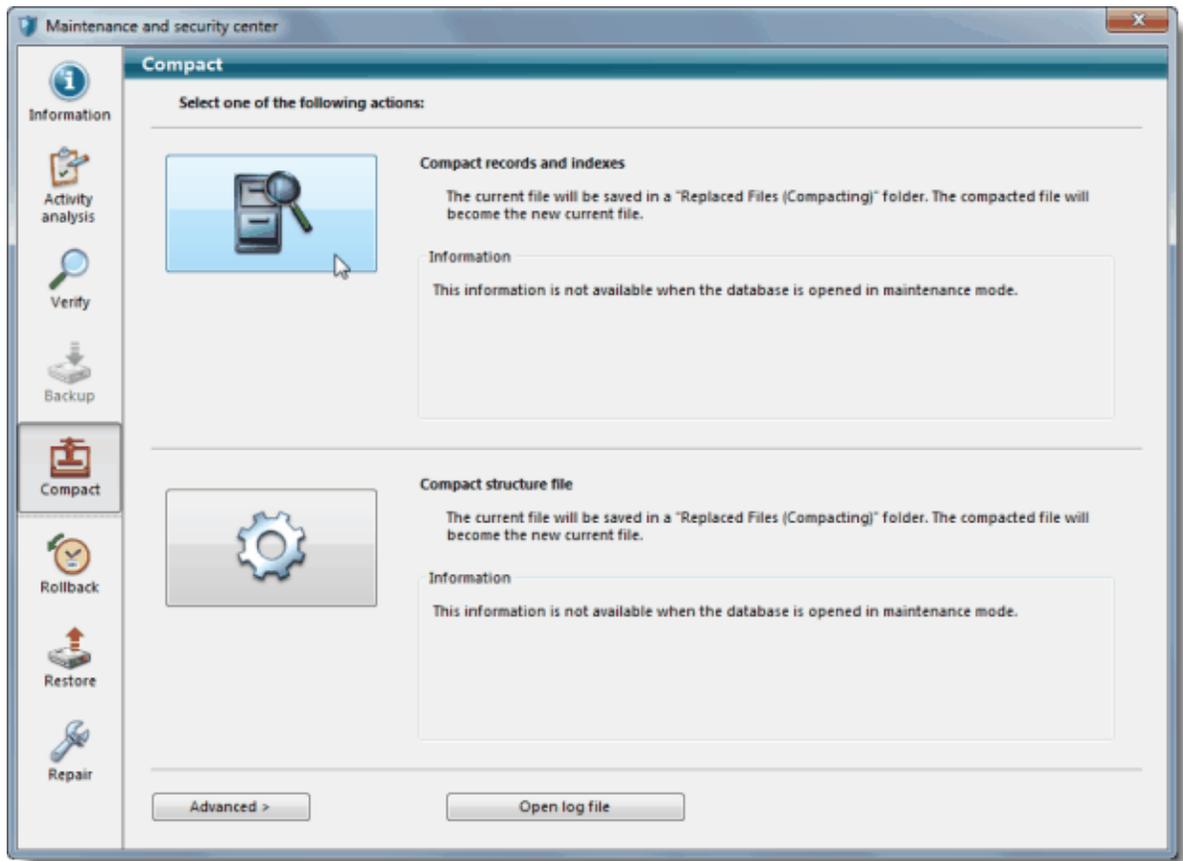
Since the structure file is compiled it cannot be repaired. If you have a problem with a structure file the best way to repair it is to perform an upgrade from the **StatsFD** web site, www.nfirs5.com.

7.3 Compact

Compacting the Data File

Compacting can greatly enhance the speed of the database. Compacting the records and indexes is as easy as pressing the "Compact records and indexes" button. Simply follow the instructions on the screen.

In general you should consider compacting the data file every 6-months or so.



Do not attempt to compact the Structure file. It does not work the same way.

Remember each time you compact you are essentially creating a backup of the data. You may never need to Backup and Restore the database if you simply use the compacting feature regularly.

Index Files

Two files are used to index structure and data file access.

If you quit the application and delete the "StatsFDV13.4DIndy" file the structure index will automatically rebuild when you start the database. Similarly, if you quit the application and delete the "StatsFDV13.4DIdx" data file index it will automatically be rebuilt the next time you start the application.

7.4 Setting-up Incident Types

How to Setup Accreditation Incident Type Categories

Accreditation uses categories of incident types such as "Building Fires", "Wildland Fires", "Special Operations", "Technical Rescue", "Hazmat" and "EMS". **StatsFD** allows you to define which NFIRS 5 incident type codes will be used for each category.

Here's a video that shows you how to manage incident type categories in **StatsFD**:



7.5 Global Data Editing

How to Perform a Global Data Edit

With **StatsFD** you can make global changes to your data. Let's say your RMS system allows responders to enter Engine 1 as; E1, E-1 or Eng 1. Even though each of these references is for the same apparatus each will appear as a different apparatus when creating run statistics.

A "Global Data Edit" can be used to standardize the vehicle reference for all incident and apparatus responses. This feature can save a lot of time.

Here's a video that shows you how to perform a Global Edit:



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