Social Networking Products II: Twitter Applications

Naval Postgraduate School (NPS) Earthquake Response Project

Playbook #: RSC-05B
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Executive Summary

This playbook is the one of a series of “Playbooks” designed to assist first responders and emergency managers with the use of remote sensing data for improved earthquake response. This Playbook is a product of a pilot project funded by the Department of Homeland Security and conducted by the Naval Postgraduate School (NPS) Remote Sensing Center (RSC) to explore remote sensing imagery and other geographic information in support of earthquake response.

Social media can be an important source of information during disaster situations and many government organizations are leveraging this tool to improve their responses to these situations. Twitter is a free, social-media microblogging tool that can allow anyone with a Twitter account to send or monitor geocoded messages from around the globe. As part of this effort, Twitter accounts have been customized for use by the Monterey County Office of Emergency Services (OES) and Monterey City.

Several Twitter applications are available that can help sort, filter, and data mine Twitter feeds. The most popular and easiest to use are currently TweetDeck and Trendsmap. This playbook is intended to be an instruction manual for these Twitter applications, as well as a guide on how to create emergency-management-friendly Tweets using the Tweak-the-Tweet syntax.

The Playbook Directory near the end of this document shows the NPS Earthquake Response Playbook sequence to help put this Playbook into perspective and give an overview of products resulting from this research and some aspects of practical implementation. The content of each Playbook is briefly described; however, users are referred to the specific named and numbered Playbooks for full product descriptions. These provide additional detailed product information, instructions on how to separately utilize the individual products, and how to combine them into an integrated system for improved earthquake response.
Overview

Sponsored by the Department of Homeland Security (DHS) Science & Technology Directorate, the Remote Sensing Center (RSC) at the Naval Postgraduate School (NPS) has developed a series of instructional playbooks designed to assist first responders and emergency managers with the use of remote sensing technology for improving earthquake response.

This playbook (Playbook #: RSC-05B) is the one of a series of instructional guides emerging from the research completed for the Earthquake Response Project at NPS conducted during 2011 - 2012. The objective of the NPS Earthquake Response Project was to improve post-disaster response and recovery through the delivery and integration of remotely-sensed data and social media into existing Emergency Management Concept of Operations (CONOPS).

Social media can be an incredibly powerful tool during disaster situations. Many emergency management agencies and government organizations are leveraging the use of social media to improve their response to disasters by: enhancing situational awareness, strengthening operational aspects of response, supporting recovery efforts, and building community resilience, in addition to becoming an essential source of data during disasters.

With modern social-media technology, it is now possible to communicate directly with the public and monitor public messages for direct or indirect requests for assistance. With the public often being the first to arrive in a disaster situation, their emailing, tweeting and texting of information makes them an essential part of the new 21st century response and reporting of disasters/incidents. Agencies can take advantage of having this team of social-media first responders by monitoring information shared on social-media sites to:

1. Identify pleas for help from isolated citizenry or citizens in austere communications environments
2. Utilize crisis mapping by identifying and monitoring hazards, dangers, and incidents reported by citizen observers.

Twitter is a social-networking and microblogging service that enables its users to send and read text-based messages of up to 140 characters, known as "Tweets". If a Tweet has been sent from a device with geospatial capabilities, these Tweets can also carry the location from which the Tweet was sent. Although the value of tweets for disaster response has varied considerably over time and space, this is changing for the better as more people move towards using social media and become savvier at using it to convey critical information. Twitter can be an invaluable tool during a disaster for its ability to provide two-way communication between emergency management officials and the community, but also in its ability to provide crowd-sourced information (i.e., crisis type, location, time, people involved, etc.) in real time.
A Twitter “language”, or syntax, has been developed to help the emergency management community understand the messages being generated. As Twitter is an open, non-standardized medium of communication, it can be difficult for emergency management and first responders to mine the messages for critical information. Tweak-the-Tweet (TtT) is designed to overcome that weakness in Twitter. Developed by Kate Starbird from University of Colorado’s Empowering the Public with Information in Crisis (EPIC) research group, TtT leverages the Twitter platform as a two-way communication channel for information during emergencies, crises, and disasters.

TtT seeks to standardize Twitter communications by using a ‘Crisis Reporting Syntax’ to promote Tweet-friendly hashtag-based message composition that allows for more efficient data extraction. The new syntax requires users to format their Tweets using specific hashtags that allow automated systems to do a first round of processing on the data. This processing includes extracting location information, creating incident reports from tweets, and sorting these reports into different types of categories. The processed tweets can then be displayed in a variety of formats to allow users and/or the public to view the aggregated information. Examples include spreadsheets that can be sorted over report type and interactive maps that allow users to see where different types of information have been reported. By using Tweets in this way, emergency management can gain a better understanding of the needs of the public, and an understanding of disaster situations and can help with the strategic implementation of services and personnel in disaster areas.

Applications have been designed to maximize Twitter’s capabilities, with two of the most popular and easiest to use being TweetDeck and Trendsmap:

- TweetDeck is a social media dashboard application for management of Twitter and Facebook accounts. Like other Twitter applications it interfaces with the Twitter API to allow users to send and receive tweets and view profiles. Tweetdeck's interface consists of a series of customizable columns, which can be set up to display Twitter feeds, direct messages, and Facebook updates.

- Trendsmap (http://trendsmap.com/) is an online application that gives users a detailed view of current trends on Twitter. The website uses embedded Google Maps to depict trends at geographic locations.
Purpose/Objectives

The objective and purpose of this playbook is to provide guidance to first responders and OES officials with easy-to-use instructions on the TweetDeck and Trendsmap Twitter Applications, as well as provide guidelines on how to properly compose a Tweet using the Tweak-the-Tweet syntax.

Hardware Required

A standard personal computer or mobile device with web-browsing capabilities is required.

Software Required

- Standard web browser
- Twitter Account (To be setup with the Monterey County OES and the City of Monterey)
- Tweetdeck (v. 2.1.0)

Instructions

Users should already have a Twitter account before starting the Tweetdeck or Trendsmap applications. Sample accounts have already been built for Monterey County and the City of Monterey.

If you don’t already have a Twitter account, or need to create another one, please see the description of how to create an account in the Additional Notes section of this Playbook.

There are two versions of the Tweetdeck application available for use:

- The web application currently found at https://web.tweetdeck.com/ (recommended)
- The desktop (PC) version of Tweetdeck (currently found at http://www.tweetdeck.com/) or

For ease of use and/or for users without administration privileges on your computer, we recommend using the web-based Tweetdeck application over the PC version.

If you do not an active Tweetdeck Account, proceed to the Additional Notes section which describes how to create one.
General

1. Open a web browser (Internet Explorer recommended).

2. In the URL/Address Bar, type https://web.tweetdeck.com/ and press the Enter key or click on the ‘Go’ arrow.

3. At the ‘Sign In’ screen, enter the email address (highlighted in red on Figure 1) and the password (highlighted in green) associated with the TweetDeck Account. This is NOT the same as the Twitter account username/handle and password. If you do not have a TweetDeck account at this point, go to the Additional Notes section in this playbook to create one.

![TweetDeck](image)

**Figure 1:** Location of the Email Address text box (highlighted in red) and the Password text box (highlighted in green) required to sign in to a TweetDeck account.

4. Open a new tab in Internet Explorer by hitting ctrl-t on the keyboard or by clicking on the ‘New Tab’ tab (highlighted in red; Figure 2).

5. In the URL/Address Bar, type http://trendsmap.com/ and press the Enter key or click on the ‘Go’ arrow. You should now have two tabs open in Internet Explorer with both Tweetdeck and Trendsmap that you can switch back-and-forth between to monitor Twitter.
Figure 2: Location of the Email Address text box (highlighted in red) and the Password text box (highlighted in green) required to sign in to a TweetDeck account.

6. Peruse the Timeline column located on the far left of Tweetdeck to get situational awareness of the event. The Timeline column contains real-time information on your Twitter account (mimicking the actual Twitter webpage). This column will be your initial and primary source of information during a disaster event.

7. Send announcement tweet(s) acknowledging the disaster event and include information on how to contact your office, making sure to include preferred words/hashtags to be used in tweets to make tracking information on Twitter easier (see ‘To send a Tweet’ section below).

8. Use the search bar to add new columns that will help parse information coming in from Twitter users. The search bar can be used to follow key word/hashtags (e.g., #earthquake, #fire, #collapse, etc.) across Twitter or to follow key Twitter accounts (e.g., FEMA, CalEMA, etc.) [see ‘Using the Search Bar’ section below].

9. Use Trendsmap to zoom into the area of interest (e.g., Monterey County) to see trending Tweet topics. Search any keywords and hashtags you discover in your area of interest on Trendsmap. Trendsmap can give you a geographic sense of strongly trending Twitter topics, but Tweetdeck should be used for a more in-depth analysis.

10. Continue to monitor the situation and add/remove columns as the situation evolves (see instructions on how to add or delete columns below).
**Application Instructions:**

**Tweetdeck:**

*To send a Tweet*

Proper Syntax:

Before composing a Tweet or having users in the field compose Tweets, it is recommended that the Tweak-the-Tweet (TtT) Syntax be used (see the Overview Section for more details).

Tweets should include hashtags such as: #location, #status, #needs, #damage, or any hashtags that might appear in the future that are deemed important elements of emergency communications (Table 1).

Table 1. Example of the Tweak-the-Tweet Hashtag Syntax and its usage.

<table>
<thead>
<tr>
<th>Main Event Tag</th>
<th>Main Category Tags</th>
<th>Location Tag</th>
<th>Other Data Tags</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Must be included)</td>
<td>(Choose only one)</td>
<td>(Always include if information available)</td>
<td>(Choose as many as you need and can fit)</td>
</tr>
<tr>
<td>Examples</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#cofire,</td>
<td>#need, #closed,</td>
<td>#loc</td>
<td>#name, #src, #date,</td>
</tr>
<tr>
<td>#highparkfire,</td>
<td>#photo, #wind, #open</td>
<td></td>
<td>#contact, #details</td>
</tr>
<tr>
<td>#springerfire,</td>
<td>#offer, #fire, #road</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#estesparkfire,</td>
<td>#evac, #smoke</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#weberfire,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#FlagStaffFire</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Proper Tweet composition:

1. Include a Main Event Tag.

2. Include one Main Category Tag; write what is needed/offered or damaged, etc.

3. To add location, type #loc, then write your location information, then end with another tag symbol OR add location anywhere in tweet in latitude, longitude form (e.g., 46.8771863,-96.7898034) OR enable geo-location on your phone and Twitter client settings for locating the tweet where you are.

4. Include as many other data tags as you need and can fit; after data tags, write the info that goes with these tags (i.e., #contact Mary 555-5555, #time 3pm, #source @CNN)
Examples:

*TWEET-BEFORE:* roads from PAP to les Cayes are open migration from PAP to rural areas has begun (this shows the syntax for a text message you would like to send as a Tweet before the proper formatting is applied)

*TWEET-AFTER:* #haiti #open roads from #loc PAP to les Cayes are open #info migration from PAP to rural areas has begun (this shows the correct TtT syntax for the message above)

This tells the computer:
- what = road
- what about it = open
- where = at PaP to les Cayes
- what else: “open migration from PAP to rural areas has begun”

*TWEET-BEFORE:* Altagrace Pierre needs help at Delmas 14 House no. 14.

*TWEET-AFTER:* #haiti #name Altagrace Pierre #need help #loc Delmas 14 House no. 14.

This tells the computer:
- what = need help
- who = Altagrace Pierre
- where = Delmas 14 House no. 14.

Sending a Tweet:

1. To compose a Tweet, click on the Composition button at the top left of the TweetDeck main page (highlighted in red; Figure 3).
2. When the Composition window appears, select which account associated with TweetDeck will be “author” of the Tweet by clicking on the account icon (highlighted in red; Figure 4).

3. Compose the Tweet in the text box (highlighted in green; Figure 4). The character counter (bottom right) displays the remaining number characters available to compose the Tweet (out of 140). Consult the previous page for the proper composition and syntax of a Tweet.
4. If a picture needs to be attached to the Tweet, click on the ‘camera’ icon to include an image with the message (highlighted in blue; Figure 4).

5. If the Tweet is intended to be sent at a future date/time, click on the ‘clock’ icon to schedule the Tweet (highlighted in yellow; Figure 4).

6. If the Tweet is intended to be a direct message to another Twitter user (as opposed to a normal broadcast-like Tweet), click on the ‘envelope’ icon (highlighted in purple; Figure 4).

7. Sent the Tweet by clicking on the Tweet button (highlighted in black; Figure 4).

To add a Timeline Column in TweetDeck

Twitter timeline is a visualization tool that allows users to view Twitter feeds in a timeline format. Your home timeline is a stream showing all Tweets from those you have chosen to follow on Twitter. Users can add a Timeline column for their own accounts, or search for other Twitter user and add their Timelines.

1. Click on the ‘+’ button located on the vertical bar to the left (highlighted in red; Figure 5) to open the ‘Add Column’ window.

![Figure 5: Location of the ‘Add Column’ button on TweetDeck (highlighted in red).]

2. Click on the Timeline button (highlighted in red; Figure 6).
3. Enter a name or Twitter handle into the search bar (highlighted in red; Figure 7) and press Enter. Select either one of the search results (highlighted in green) or one of the existing Twitter accounts associated with TweetDeck (highlighted in blue). A current snapshot of the selected Timeline appears in the box on the right (highlighted in yellow).

4. Click on the ‘Add Column’ button when the desired Timeline has been selected (highlight in purple).
Figure 7: Example of an ‘Add Timeline Column’ window in TweetDeck that shows the locations of the search bar (highlighted in red), search results (highlighted in green), available Twitter accounts (highlighted in blue), current snapshot of the selected Timeline (highlighted in yellow), and the ‘Add Column’ button (highlighted in purple).

To add an Interactions Column in TweetDeck

An Interactions Column can be used to monitor mentions, re-tweets, favorites, follows, and list additions in real time by the user account. This column offers a simple way to see how others on Twitter are interacting with the account.

1. Click on the ‘+’ button located on the vertical bar to the left (highlighted in red; Figure 8) to open the ‘Add Column’ window.
2. Click on 'Interactions' button (highlighted in red; Fig. 9).

Figure 8: Location of the ‘Add Column’ button on TweetDeck (highlighted in red).

Figure 9: Location of the ‘Interactions’ button in the TweetDeck ‘Add Column’ window (highlighted in red).
3. Select one of the existing Twitter accounts associated with TweetDeck (highlighted in red; Figure 10). A current snapshot of the account interactions appears in the box on the right (highlighted in green).

4. Click on the ‘Add Column’ button to add the Interactions column to the main page (highlight in yellow).

Figure 10: Example of an ‘Add Interactions Column’ window in TweetDeck that shows the locations of the available Twitter accounts (highlighted in red), current snapshot of the selected account (highlighted in green), and the ‘Add Column’ button (highlighted in yellow).
To add a Mentions column in TweetDeck

When another user includes a username preceded by the “@” symbol in a Tweet, it is called a “mention”. A Mentions column can only be added for the Twitter accounts already associated with TweetDeck go to the section above on Setting up the TweetDeck for additional information on associating Twitter accounts.

1. Click on the ‘+’ button located on the vertical bar to the left (highlighted in red; Figure 11) to open the ‘Add Column’ window.

![Figure 11: Location of the ‘Add Column’ button on TweetDeck (highlighted in red).](image)

2. Click on ‘Mentions’ button (highlighted in red; Figure 12).
Figure 12: Location of the ‘Mentions’ button in the TweetDeck ‘Add Column’ window (highlighted in red)

3. Enter a name or Twitter handle into the search bar (highlighted in red; Figure 13) and press Enter. Select either one of the search results (highlighted in green) or one of the existing Twitter accounts associated with TweetDeck (highlighted in blue). A current snapshot of the selected Timeline appears in the box on the right (highlighted in yellow).

4. Click on the ‘Add Column’ button to add the Interactions column to the main page (highlight in purple).
Figure 13: Example of an ‘Add Mentions Column’ window in TweetDeck that shows the locations of the search bar (highlighted in red), search results (highlighted in green), available Twitter accounts (highlighted in blue), current snapshot of the selected account (highlighted in yellow), and the ‘Add Column’ button (highlighted in purple).
To add a Followers column in TweetDeck

Users can view a list of other Twitter users who follow the default account on TweetDeck. You can then use the TweetDeck interface to easily block those users or follow them in return.

1. Click on the ‘+’ button located on the vertical bar to the left (highlighted in red; Figure 14) to open the ‘Add Column’ window.

![Figure 14: Location of the ‘Add Column’ button on TweetDeck (highlighted in red).](image)

2. Click on ‘Followers’ button (highlighted in red) in Figure 15.
3. Enter a name, Twitter handle, hashtag, word, phrase, etc. into the search bar (highlighted in red) in Figure 16 and press Enter or select one of the recent search results (highlighted in green). Choose which of the available Twitter accounts to use (highlighted in blue). A current snapshot of the selected search appears in the box on the right (highlighted in yellow).

4. Click on the ‘Add Column’ button to add the Followers column to the main page (highlighted in yellow).

5. Once the Followers column has been added, users can click on the pull-down button on the right (_highlighted in red__) to direct message, add, block, or report for spam.
To add a Search column in TweetDeck
Users can add a simple search column that updates in real time when that word, phrase, hashtag, user, etc. appears on Twitter. This search can be a new search, or a saved or recent Search.

1. Click on the ‘+’ button located on the vertical bar to the left (highlighted in red; Figure 17) to open the ‘Add Column’ window.
Figure 17: Location of the ‘Add Column’ button on TweetDeck (highlighted in red).

2. Click on ‘Search’ button (highlighted in red) in Figure 18.

Figure 18: Location of the ‘Search’ button in the TweetDeck ‘Add Column’ window (highlighted in red).
3. Enter a name, Twitter handle, hashtag, word, phrase, etc. into the search bar (highlighted in red) in Figure 19 and press Enter or select one of the recent search results (highlighted in green). A current snapshot of the selected search appears in the box on the right (highlighted in blue).

4. Click on the ‘Add Column’ button to add the Search column to the main page (highlighted in yellow).

Figure 19: Example of an ‘Add Search Column’ window in TweetDeck that shows the locations of the search bar (highlighted in red), search results (highlighted in green), current snapshot of the selected results (highlighted in blue), and the ‘Add Column’ button (highlighted in yellow).

Using the Search Feature
1. Click on the upper magnifying glass icon on the vertical bar to the left (highlighted in red; Figure 20) to open the search interface.

![Figure 20: Location of the search icon on TweetDeck (highlighted in red).](image)

2. When the search interface opens, enter text, name, topics, hashtag, etc. in the search field on the TweetDeck Main Menu (highlighted in red; Figures 21a-c) and hit Enter.

3. Choose either Tweets to search for Tweets or Users to search for usernames/handles (highlighted in green; Figures 21a-c).

4. Choose a Content filter for Tweets (highlighted in blue; Figure 21a):
   - by images, video, images and video, or links
   - by excluding Tweets by keywords
   - by language
   - by including or excluding re-tweets

5. Choose a Users filter for Tweets (highlighted in yellow; Figure 21b):
   - by a specific user, your own account ('me'), verified users, or a member of a list
   - by mention of a specific user or your own account ('me')

6. Choose an Engagement filter for Tweets (highlighted in purple; Figure 21c):
by a specific number of retweets
by a specific number of favorites
by a specific number of replies
or by some combination of the three fields

7. Click on the ‘Add Column’ button to add the new column to the dashboard (highlighted in black, Figures 21a-c).

8. Once a column has been added, these same filters can be adjusted at any time by clicking on the options pull-down button () on the upper right of a column.

Adding additional Columns to TweetDeck
A variety of other columns are available and added in similar fashion.

- A list in Twitter is a customized group of Twitter users. You can create your own lists or subscribe to lists created by others. Viewing a list timeline will show you a stream of Tweets from only the users on that list. Note: Lists are used for reading
Tweets only. You cannot send or direct a Tweet to members of a list, for only those list members to see.

- A messages column lists any direct messages that have been sent to the account associated with the column.

- TweetDeck can monitor the most popular trends on Twitter. A trends column can be added that lists the any Tweets that contain the trending topic.

- A ‘Tweets’ column can be added to list any Tweets sent from any of the available accounts on TweetDeck, or from any other accounts on Twitter.

- Favorites, represented by a small star icon next to a Tweet, are most commonly used when users like a Tweet or want to mark it for later use.

- An Activity column can be added to view favorites, follows, and list additions by your accounts in real time.

- Users can add a column that displays any Tweets that mention the user of the Twitter account.

- Users can add a column that displays all direct messages to the user’s Twitter account. These are messages that are sent between two Twitter users and are not for public consumption. See the section on Sending a Tweet for further information.

- Users can add a column that displays a list of Tweets that are scheduled to be sent from the user account. To schedule a Tweet for future transmission, see the section on Sending a Tweet for further information.

- Once any column has been added, content in the columns can be filtered at any time by clicking on the options pull-down button (square) on the upper right of a column (See ‘Using the Search Feature’ above for details).

To Delete a Column

1. Click on the options button located on the upper-right-hand side of the column header (highlighted in red, Figure 22) to have the options window appear at the top of the column.

2. Click on the ‘Delete’ button (highlighted in green, Figure 22).
To Move a Column

1. Click on the options button located on the upper-right-hand side of the column header (highlighted in red, Figure 23) to have the options window appear at the top of the column.

2. Click on the ‘handle’ on the left side of the Column (highlighted in green; Figure 23) and drag either left or right change the position of the column, or use the left or right arrows (highlighted in blue, Figure 23) to move the column in that direction incrementally.
**Trendsmap Web Application** (online application that gives users a detailed (Map) view of current trends on Twitter)

**Opening the Trendsmap Web Application**

1. Open a web browser (Internet Explorer preferred).
2. In the URL Address Bar, type [http://trendsmap.com/](http://trendsmap.com/) and press the Enter key or click on the ‘Go’ arrow. Figure 24 shows a generic Trendsmap webpage.

![Trendsmap Webpage](image-url)

**Figure 24:** Example Trendsmap webpage.
3. An Internet Explorer warning window may appear when Trendsmap tries to track your physical location. It is recommended that the user allow Trendsmap to track its location so as to streamline the usage of the application. In the warning window that appears (Figure 25), click on ‘Options for the Site’ button (highlighted in red) then in the new window that appears, click on the ‘Always Allow’ button (highlighted in green).

![Figure 25: Warning window regarding location tracking by Trendsmap.](image)

**To scroll/navigate around the Trendsmap**

Trendsmap controls are located at the top left-hand side of the map (Figure 26).

![Figure 26: Close-up view of the Trendsmap main page showing basic map controls.](image)

1. To scroll, click and drag on the Trendsmap using the mouse for continuous motion -OR- click on the direction arrows located on the round scroll pad (highlighted in red; Figure 26) to pan in steps towards the direction the arrow points.

2. To zoom the Trendsmap, choose one of the desired pre-set zoom-levels from the following:
   - **My Location** (highlighted in blue; Figure 27) – Will zoom and center the Trendsmap to your current location as determined by either the Trendsmap location tracking feature (if turned on) or as approximated by the IP address of the computer running Trendsmap.
   - **My City** (highlighted in yellow; Figure 27) – Will zoom and center the Trendsmap to your current city as determined by either the Trendsmap location tracking feature (if turned on) or as approximated by the IP address of the computer running Trendsmap.
   - **My Region** (highlighted in purple) – Will zoom to country/continent scale.
- World (highlighted in black) – Will zoom out and center the Trendsmap to your current location as determined by either the Trendsmap location tracking feature (if turned on) or as approximated by the IP address of the computer running Trendsmap.

-OR- Manually change the scale (zoom-level) of the Trendsmap:

1. Center the map on the location you wish to either zoom in to or zoom out of by clicking and dragging the Trendsmap with the mouse.

2. Using the slider bar (highlighted in green; Figure 27), click on the ‘+’ button at the top of the bar to zoom in one step or click on the ‘-‘ button at the bottom of the bar to zoom out one step –OR– use the slider bar for zoom control by clicking directly onto the bar itself or by clicking and dragging the slider with the mouse. Clicking on the top parts of the slider bar or moving the slider upward on the bar zooms into the map while clicking on the bottom parts of the slider bar or moving the slider downward on the slider bar zooms out of the map –OR– double left click to zoom in one level towards the mouse pointer or double right click with the right mouse button to zoom out one level away from the mouse pointer.

Find trends on Twitter

The largest trends on Twitter are tagged on the Trendsmap and placed close to the location where the topic is most active (Figure 28). The size of a tag corresponds to the frequency of Tweets about that particular topic.

Figure 28: Example Trendsmap of the California area that shows the current highest trending Tweet topics in the region and their approximate location.
Search for trends at a specific location:

1. From the Trendsmap home page, enter a key word or location into the search bar (highlighted in red; Figure 29).

![Figure 29: Example Trendsmap banner showing the search bar location (highlighted in red).](image)

2. A drop down menu will appear that lists the search results by both locations and topics (Figure 30). Click on one of the location results (highlighted in red) to navigate to a webpage that lists the popular and breaking Twitter trends for that location (highlighted in red on Figure 31). Also displayed is a 7-day time series of the global volume of Tweets on the location selected (highlighted in green; Figure 31).

![Figure 30: Example Trendsmap search of locations (highlighted in red) that match the subject in the search bar.](image)

![Figure 31: Results of a location search of Monterey, CA (highlighted in red) and the 7-day time series of the global volume of Tweets (highlighted in green).](image)
3. To see more trend information on the location selected, the middle right-hand side of the page contains the current highest trending links (highlighted in red; Figure 32), trending videos (highlighted in green), trending images (highlighted in blue), and trending tweets (highlighted in yellow) for the selected location.

![Trending Monterey Links](image1.png)

**Trending Monterey Videos**

![Trending Monterey Images](image2.png)

**Latest Monterey Tweets**

![Latest Monterey Tweets](image3.png)

Figure 32: Example Trendsmap location results for Monterey, CA showing various trending links (highlighted in red, videos (highlighted in green), images (highlighted in blue), and tweets (highlighted in yellow) for Monterey, CA.

*To find trending topics*

1. From the Trendsmap home page, enter a key word or hashtag into the search bar (highlighted in red; Figure 33).
Figure 33: Example Trendsmap banner showing the search bar location (highlighted in red).

2. A drop down menu will appear that lists the search results by both locations and topics (Figure 34).

3. Click on one of the topics (highlighted in red; Figure 34) to display the results on the Trendsmap.

Figure 34: Example Trendsmap search results of topics (highlighted in red) that match the subject of the search.

4. The map will appear showing the geographic locations of the largest volume of Tweets containing the search phrase and well as a real-time feed of Tweets containing the search phrase (highlighted in red; Figure 35). Figure 35 shows the results of a search for the #earthquake hashtag with the map set to regional scale.

Figure 35: Example Trendsmap search result for the topic ‘earthquake’ showing the geographic locations on the highest trends and the current Twitter feed of those Tweets containing the word earthquake (highlighted in red).
Notice the 2 locations where #earthquake is trending that are likely close to the epicenters of actual earthquakes. To the right of the map is a real-time feed of Tweets that contains the #earthquake hashtag as well as a local and global frequency charts at the top. Clicking on any instance of #earthquake on the Trendsmap will change the window on the right to then show only statistics and Tweets related to that specific tag.

Using the pre-defined trend finders:
The bottom section of the generic Trendsmap pages has several additional sections including:

- **Breaking Globally** – Section that shows the top words/hashtags currently trending on Twitter worldwide (Figure 36). Click on any of the trending topics to be taken to a Trendsmap showing the geographic locations of the highest volume of Tweets containing that topic with a real-time Twitter feed filtered for Tweets on that topic.

![Breaking Globally](image)

Figure 36: Example ‘Breaking Globally’ selection from the Trendsmap main page.

- **Country & City trends** – Section that allows user find trending topics by pre-defined geographic locations (Figure 37). Click on any of the locations to navigate to a webpage that lists the popular and breaking Twitter trends for that location and displays a 7-day time series of the volume of Tweets on that topic. Additional trend information is available in the form of highest trending links, trending videos, trending images, and trending tweets for the selected location. Click on the ‘See all locations’ link (highlight in red) to see trends in every major city across the globe.
Figure 37: Example Country and City Trends from the Trendsmap main page.

- Trending User – Section which shows the most active handles (names) on Twitter (Figure 38). Click on any of the blocks to navigate to another webpage showing a Trendsmap and a real-time Twitter feed filtering Tweets from or Tweets mentioning the user selected.
Figure 38: Example ‘Globally trending Users’ selection from the Trendsmap main page.
Additional Notes

How to Create a Twitter Account

1. Go to http://twitter.com and find the sign up box (Figure 39), or go directly to https://twitter.com/signup.

![Twitter sign up page](image)

Figure 39: Example Twitter start page where users can create a Twitter account (highlighted in red).

2. Enter your full name (highlighted in red; Figure 39), email address (highlighted in green), and a password (highlighted in blue). Click Sign up for Twitter (highlighted in yellow).

3. On the page that opens, you can create a username (highlighted in red; Figure 40) or choose one suggested by Twitter (highlighted in green).

4. To remain signed-in to the Twitter account (default, less secure), keep the boxed checked next to “Keep me signed-in on this computer”, otherwise uncheck the box to have the account signed-out each time the web browser closes (highlighted in blue).

5. Twitter can determine the accounts you might want to follow based on recent visits to websites. The feature works by suggesting people who are frequently followed by other Twitter users that visit the same websites. To allow Twitter to be able to tailor your account (default), keep the boxed checked next to “Tailor Twitter based on my recent website visits” (highlighted in yellow; Figure 40). Otherwise, uncheck the box to have the account created without Twitter assistance (highlighted in yellow).

6. Click Create my account (highlighted in purple; Figure 40).
Figure 40: Example Twitter ‘Account Creation’ page illustrating how users can create a Twitter account.

7. Twitter will send a confirmation email to the address you entered on sign up. Click on the link provided in that email to confirm your email address and account.

TweetDeck Settings

*To install TweetDeck onto a PC*

1. Open a web browser (Internet Explorer recommended).

2. In the URL/Address Bar, type [http://www.tweetdeck.com/](http://www.tweetdeck.com/) and press the Enter key or click on the ‘Go’ arrow.

3. When the TweetDeck main page opens, click on the Download button (highlighted in red; Figure 41).
4. A warning window may appear regarding the download of a third-party executable file. Figure 42 shows a typical warning window that appears in Internet Explorer. To continue the installation process, click on ‘Run’ (highlighted in red).

![Figure 42. Illustration of the Internet Explorer warning window. To continue with the TweetDeck installation, click on the ‘Run’ button (highlighted in red).](image)

5. When the installation file is executed, a TweetDeck End-User Agreement window will open (Figure 43). To continue with the installation, click the box next to ‘I accept the terms in the License Agreement’ (highlighted in red) and then click on ‘Install’ (highlighted in green).

6. During the process, a ‘TweetDeck Setup’ window will appear that displays a ‘Status Bar’ showing the progress of the installation. No action should be required. When the ‘Status Bar’ reaches 100%, the next window (Figure 44) should appear. If this does not occur automatically, click on the ‘next’ button.
7. Click on the ‘Finish’ button to complete the installation and close the window (Figure 44).

Figure 43. TweetDeck End-User Agreement window: To proceed with the TweetDeck installation, click the box next to ‘I accept the terms in the License Agreement’ (highlighted in red) and then click on ‘Install’ (highlighted in green).
To create a TweetDeck Account

Users must have an active TweetDeck Account in order to use TweetDeck. This account differs from a Twitter account and the email addresses, usernames, and passwords associated with Twitter accounts are not necessarily the same as those with TweetDeck.

To create a TweetDeck account:

1. Open a web browser (Internet Explorer recommended).
2. In the Address Bar, type [http://www.tweetdeck.com/](http://www.tweetdeck.com/) and press the Enter key or click on the ‘Go’ arrow.
3. Click on ‘Sign In’ (highlighted in red; Figure 45).
Figure 45: TweetDeck home page.

4. Click on the ‘Create Account’ button (highlighted in red; Figure 46). The left-hand side of the TweetDeck window will change so that a TweetDeck account can be created.

Figure 46: Location of the ‘Create Account’ button on the Account Creation window.
5. On the left-hand side of the account creation window (Figure 47), enter a valid email address in the ‘Email’ box (highlighted in red) and an original password in both the ‘Password’ box and the ‘Confirm Password’ boxes (highlighted in green).

6. Click on the ‘Sign Up’ button (highlighted in yellow) to complete the TweetDeck Account creation process.

Figure 47: Location of the Email Address text box (highlighted in red) and the Password text boxes (highlighted in green) required to sign up for a TweetDeck account.
Setting up the TweetDeck

Once you are signed into either the PC or Web Application the following appears (Figure 48):

Figure 48: Add Twitter Account

1. Click on Add Twitter Account to connect to your Twitter account (Must already exist – see instructions at the beginning of the Instructions section of this document.

2. On the following screen (Figure 49), enter your twitter login and password and press the Enter key.

Figure 49: Authorize app

3. Click on the X in the upper right corner of the resulting dialog (Figure 50) to dismiss and return to the main TweetDeck page. Tweets associated with your Twitter account will be displayed (Figure 51).
Figure 50: Dialog showing TweetDeck connection to your Twitter account.

Figure 51: The main TweetDeck screen with connected Tweets.
To open the TweetDeck Application (PC)

1. If you want to run the PC TweetDeck Application, click on the Windows Start button at the bottom left of the PC desktop, navigate to the TweetDeck application, and choose the TweetDeck icon to start the program. Otherwise, see the section on the Web Application below.

If you started the PC TweetDeck Application, skip the next section and continue with “Setting up the TweetDeck”.

Figure 52 illustrates where to find the Settings button to allow navigation to where the backend TweetDeck administration is located. The various options available are discussed below.

![Figure 52: Location of the Settings button on TweetDeck (highlighted in red).](image)

General Tab
The following options are available in the General tab (Figure 53):

- Twitter Streaming – Check this option to toggle real-time streaming on/off.
- Show Notifications on Startup – Check this option to allow notifications when TweetDeck is started.
- Theme – Dark or light theme
- Column Size – Controls the size of columns on the display (narrow or regular).
- Font Size – Controls the font size (small, medium, or large).

![Sample General Tab of the Application Settings Window on TweetDeck.](image)

**Figure 53:** Sample General Tab of the Application Settings Window on TweetDeck.

**Services**

Use this window to select which service should be used for Link Shortening (Figure 54). The default setting is for Twitter to provide this service (recommended).

![Sample Services Tab of the Application Settings Window on TweetDeck.](image)

**Figure 54:** Sample Services Tab of the Application Settings Window on TweetDeck.
**Accounts**

Use the Accounts tab to add or remove Twitter accounts (Figure 55). The selected account becomes the default account, and only one account can be used as the default. The ‘Remove’ button located to the right of the account will remove that account from TweetDeck, but will not affect that account itself.

![Figure 55: Sample Accounts Tab of the Application Settings Window on TweetDeck.](image-url)
**Mute**

Use this window to set a global filter on TweetDeck (Figure 56). This filter is set using the dropdown menu and can be based upon Text content, Author, or Source (e.g., iPad). The desired filter can be input in the ‘Using:’ text box beneath the filter dropdown menu.

![Figure 56: Sample Global Filter Tab of the Application Settings Window on TweetDeck.](image-url)
**Playbook Directory**

This Playbook is one of a series of Playbooks designed to cover the technical breadth of the NPS-DHS Earthquake Response Project. Each Playbook describes one series of products and its use. These Playbooks can be printed, transmitted electronically as Portable Document Format (PDF) documents, or stored locally on existing emergency management networks, workstations, or mobile devices. The following summarizes the individual Playbooks developed as part of this project and available to emergency responders. See the listed Playbook for specifics and details.

**Playbook #RSC-01: NPS-DHS Remote Sensing Project/Products Overview**
Playbook documenting project and scope and big picture for other Playbooks

**Playbook #RSC-02: Monterey County Baseline Products and Pre-Event Data Processing**
Playbook documenting baseline data, preprocessing, use/analysis of basic products

**Playbook #RSC-03: Monterey (City) Infrastructure Products**
Critical Infrastructure data (location, description, pre-event photos, geolocated imagery frames and metadata)

**Playbook #RSC-04A: Airborne Imagery Change Detection Products (SDSU)**
Monterey baseline imagery of critical infrastructure, Camp Roberts imagery, and selected change detection example products. Full-Resolution NEOS imagery

**Playbook #RSC-04B: NOAA Night Lights/Power Change Detection and Fire Detection Products**
Night lights/power and fire detections (NOAA)

**Playbook #RSC-05A: Social Networking Products (Ushahidi)**
Ushahidi implementation and instructions for Monterey City/County

**Playbook #RSC-05B: Social Networking Products (Twitter)**
Twitter implementation and instructions for Monterey City/County

**Playbook #RSC-06: Mobile Application Damage Assessment Product**
Lighthouse damage assessment application download, install, configure, execute

**Playbook #RSC-07: Post Event Processing Scenarios Products**
LiDAR DEM, DSM, derived products, NAIP/WV-2 Change Detection Examples

**Playbook #RSC-08: Soft and Hardcopy Output Products and Distribution**
GeoPDF Products, Monterey Map Books, w/National Grid Index, PDF and Printed

**Playbook #RSC-09: Common Operating Picture (COP) Products**
Sensor Island Common Operating Picture, UICDS to WebEOC Link

**Playbook #RSC-10: Systems Integration, Transition, and Training**
Hardware/Software Installation Details, Coordination, and Integration
References

- http://trendsmap.com/
- http://tweakthetweet.appspot.com/client/instructions/ag10d2Vha3RoZXR3ZWV0cg0LEgVFdmVudBiwnA4M
- http://www.tweetdeck.com/

These are some of the publications so-far describing elements of the NPS/RSC earthquake response remote sensing research efforts and products:


