# BBBS Event Finder Application – Operations Manual

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## Application Overview

The BBBS of Central TX Event Finder is a web-based application that provides big-and-little matches a quick and easy to use means of locating activity opportunities in their area for outings. It does so by querying the BBBS of Central TX events Google calendar as well as the list of Match Discount Partners (also in the form of a Google calendar) for a user-entered date, and displaying the available activities in a drop-down list as well as plotted onto an interactive map UI.

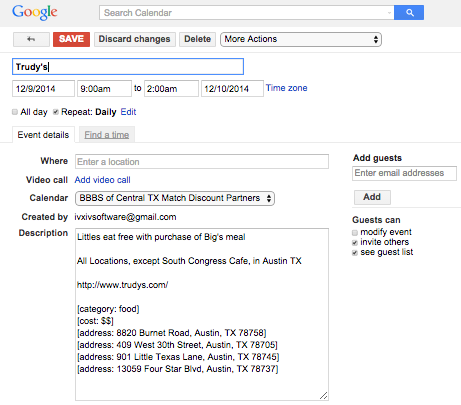
The application is hosted at <http://bbbsevents.org>, with additional back-end services currently hosted on the developer’s shared-hosting server (to eventually be migrated to bbbsevents.org, barring any technical limitations).

## Event Setup

In order to maximize an event entry, whether in the BBBS events Google calendar or the Match Discount Partners Google calendar, the following steps are recommended:

* Include an address for the event
  + **NOTE:** Enter addresses in the format: “123 Some St., Sometown, TX 78910”, i.e. only include street number, name, city, state and zip code.
  + Do not include unit / apartment / suite numbers – mapping results will be less accurate
  + Do not use business or place names – mapping of the event will fail
  + Do not use intersections / other descriptive ways of identifying a location (such as “the corner of MLK and Airport”) – mapping of the event will fail.
  + These restrictions are due to known limitations with the ESRI / ArcGIS geocoding system, which has been donated for use free-of-charge for the application
  + **NOTE**: for events with multiple locations, e.g. a restaurant chain, you can leave the primary location field blank in Google calendar and instead use [location] blocks in the event description field, described below.
* Specify the date / time for the event, and setup as a repeat / recurring event as appropriate.
* Include a detailed description for the event. If possible, also include the following:
  + An appropriate URL for the event’s website, such as <http://mycoolevent.com>
  + Additional event metadata at the end of the event description field, to allow the app to filter it based on category and cost, as well as optionally specify multiple locations. The format of these metadata tags is as follows:
    - [category: \_value\_] where \_value\_ is one of: educational, social, outdoors, entertainment or food.
    - [cost: \_value\_] where \_value\_ is one of: $, $$, $$$ or $$$$ - indicating a cost of “up to $5”, “up to $10”, “up to $20” or “over $20” respectively. If the event has no cost, you should omit the [cost: ] block altogether.
    - [address: \_value\_] where \_value\_ is a single-line address entry formatted as described above. Use the [address: ] metadata block for an event that has multiple locations; otherwise, simply use the built-in Google calendar “Where” field.

Here we see an example of an event with category, cost and multiple locations as entered into Google calendar:



## Events Calendar

The Google calendar used by the application for BBBS of Central TX events is the one located at this address at bigmentoring.org:

<http://www.bigmentoring.org/calendar>

Any changes made to this Google calendar will be reflected in the application. Presently this Google calendar is controlled by the Google account [bbbsctxcalendar@gmail.com](mailto:bbbsctxcalendar@gmail.com), which belongs to the BBBS of Central TX organization.

## Match Discount Partners

Similar to the BBBS Events Google calendar, a separate Google calendar has been constructed to provide Match Discount Partner information to the event finder application. This Google calendar resides at this URL:

<https://www.google.com/calendar/embed?src=f6v7nd9kgvi7sjem6at9s0sva0%40group.calendar.google.com&ctz=America/Chicago>

This calendar has been shared with the [bbbsctxcalendar@gmail.com](mailto:bbbsctxcalendar@gmail.com) Google account, so that Gmail account can be used to edit the Match Discount Partners calendar if desired. This calendar requires manual updating to be kept in sync with any changes to the list of Match Discount Partners (as listed here: <http://www.bigmentoring.org/discountpartners> ) - there is no automatic updating of the Google calendars.

## User Suggested Events

The application provides a mechanism for users to suggest events for inclusion in the app. This is done with an email form submission that is accessed from the **Help** menu 🡪 **Suggest Event** menu item. Users can fill in as much information as they have, and when they click the “**Send to BBBS of Central TX**” button, this event information is sent via email to [bbbsctxcalendar@gmail.com](mailto:bbbsctxcalendar@gmail.com). In this way, BBBS of Central TX can control which user-submitted events are added, and edit them as appropriate.

## Website Logs

If interested, website logging has been enabled for the bbbsevents.org application site and can be viewed using the following steps:

1. Log into hostmysite.com, at: <https://my.hostmysite.com/single.html> (you will need valid credentials)
2. Once logged in, click the “View Reports” tab at the top of the page
3. From here you will have access to the SmarterStats Service reports. Note that many of the graphical reports require Microsoft Silverlight to be installed.

## ESRI ArcGIS Geocoding

The mapping functionality in the event finder application is provided through the use of ESRI’s ArcGIS service. A sponsor of the Hack4Austin 2014 event that spawned the development of this application, they provided the development team with API access and 2500 API credits. API credits are used each time the application performs a mapping request for an address against the ArcGIS servers. As these credits are a finite resource that typically cost real-world money, a custom database back-end service was also developed for the application that caches all successfully geocoded addresses, so that any given address will only ever be mapped one time. This greatly reduces the burn-rate of ArcGIS API credits use.

The current balance of ArcGIS API credits can be checked on the ESRI developer website. To do so, login with an ESRI developer account that has been linked to the BBBS Event Finder application project, and then view the credit use at this URL:

<https://developers.arcgis.com/en/usage-summary/#/>

**NOTE**: the current grant of ArcGIS API credits is set to expire in **July of 2015**. In order to prevent this from happening, we need to work with our developer contacts at ESRI when that time approaches:

* Charles Brigham: [CBrigham@esri.com](mailto:CBrigham@esri.com)
* Jeff Archer: [jarcher@esri.com](mailto:jarcher@esri.com)

## Web Based Client Front End

The BBBS Event Finder application front-end is web-based, written entirely in HTML 4.0, CSS and JavaScript. It should work in most modern web browsers on any device with an HTML 4.0 / JavaScript enabled browser, including:

* Chrome
* Firefox
* Safari 3+
* Internet Explorer 7+

The application has been successfully tested on a variety of mobile phones, tablets and desktop PCs.

## PHP / SQL Database Backend

As mentioned earlier, a custom web-based database backed was developed to perform the following tasks:

* Cache all address geocoding results to a database, so that any given address need only be geocoded once.
* Contain all the data and logic needed to perform Google calendar queries and ArcGIS geocode operations. This work is best performed on a remote backend server so that sensitive credentials are never available to the client application, as this would be a security risk.

The backend database used to store geocoding results is a very basic SQL database. The server logic used to perform the backend functionality is written almost entirely in PHP, with a small amount of Python code added in order to perform HTTP requests (on shared hosting plan servers such as ours, this functionality is typically not available in PHP, but happily does work out-of-the-box with Python).

## Conclusion

For any questions, concerns or inquiries of any sort related to the BBBS Event Finder application, please contact the developer, Stefan Sinclair, at: [stefan@ivxiv.com](mailto:stefan@ivxiv.com) .