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# User Manual—Bridge Design Contest Administrator

Engineering Encounters, Inc.

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## 1 Overview and Changes

This document explains how to use the Engineering Encounters Bridge Design Contest Administrator Interface or CAI. It covers only the CAI itself, assuming the reader already knows about contest operations, policies, and procedures. The CAI is a web browser-based “window” into the contest database. Its design allows a small administrative team to conduct the contest even if the number of participants is very large.

Here is a brief overview of CAI functions:

- Create and activate automatic schedules for annual cycles of qualifying and semi-final rounds.\*
- Review and accept top teams.
- Post official standings.
- Set up local contests and view their current standings.
- Establish team groups, where only the top team appears in standings.\*
- Inspect and analyze designs and download them.
- Designate teams for the semi-final round and post contestant instructions.\*
- Query the contest database in various ways.
- Generate Certificates of Achievement for local contest and qualifying round accomplishments.\*
- Send bulk emails.\*
- Manually disable the contest, with an explanatory message banner displayed at the login page.\*
- Serve maps showing the distribution of US contest participants.

### 1.1 Changes

The features above marked with asterisks (\*) are new. Indeed, there are many changes in the CAI with respect to the original 1999 design. Some are obvious. Others are subtle but still important. A brief overview follows. Those who have never used the original CAI may safely skip to the next section.

Automatic schedules are new. In the old CAI, the milestone dates and times of contest rounds could be established only at the server console. Now they can be set in the CAI.

Team member groups are a new feature to support the “one winner per school” rule.

Manual disabling of logins is another new facility that has moved from the console to the CAI web interface, available to any Administrator at any location.

The new CAI has *persistent configuration*. Various options and search criteria are automatically remembered between uses. Where the old administrator had only one “account,” the new one allows any number of administrator login names so that a different persistent configuration can be saved for each.

The new CAI does not require setting up new, different accounts for semi-final teams. Instead, semi-finalists are merely marked in the Team Review portion of the CAI.

In the new system, any team can participate in up to four local contests at any time. These can be either 4-character (all-scenario) or 6-character (scenario-specific) contests without regard for the current contest round. The old system allowed only 4-character contests during the Qualifying Round. That restriction is gone. Another quirk of the old system was that 6-character codes could not change after registration. This quirk is also gone. Teams can add and delete local contests at any time.

This added flexibility results from added internal complexity. The new system tracks the best design for each scenario for each team rather than only a single best per team in the old one. Formerly, a bridge submission was accepted by the system only if it improved on a team’s current best (lowest cost) bridge overall. The definition of *improvement* has changed in the new system: a bridge is an improvement, and therefore accepted in the new system, if it has cost lower than all previous submissions by the team *for the same scenario*. This more liberal policy will probably cause more bridges to be accepted per team.

Bulk email is now performed by the contest server. This is necessary to gain the benefit of a registered bulk mail service that has much less chance of being blocked by spam detectors. A new “rich text” editor in the CAI allows messages with standard text formatting. The rich text editor also allows documents with images. At present, however, these will not work for bulk email.

Downloadable Certificates of Achievement that acknowledge and celebrate the standing that each team earns in the contest are also new.

Rejected teams can change their team names in the contact information form. Re-registering after a bad team name choice is no longer required.

Other changes are for usability.

- Team names that contain contestant last names are highlighted.
- Design review, analysis, and download have been integrated with the review screen.
- Differences between currently posted and new standings can be displayed with strikeouts and color coding in a manner similar to Microsoft Word revision marks.
- The local contest manager now protects against inadvertently choosing a local contest code that is already in use.
- Team password resets are now handled by teams themselves via email. Administrators are no longer involved in this process.

## 1.2 We need you

The CAI remains a work in progress. If you're an Administrator and see something that the CAI could do to make your life easier, tell the CAI software team.

## 2 Key concepts

Several key concepts are important to avoid mistakes and use the Administrator efficiently.

### 2.1 Administrators

An Administrator is a person entrusted with contest administration and decision authority. Each Administrator has a user id and password for validating his or her identity. The password is initialized with an easy-to-guess value when the system is created. Therefore, each Administrator must immediately log in to change his or her password to a personal, difficult-to-guess value. The main purpose of Administrator accounts is to store persistent information about each Administrator's preferences.

Additionally, the separate logins allow individual activity to be tracked in the server logs. With the old Administrator, determining who performed a given Administrator function—occasionally useful—was difficult.

There is nothing to prevent more than one Administrator from logging in and making changes during the same period. This has always been true. External communication among Administrators is needed to prevent confusion when one Administrator's view changes due to work done by another at a different location.

Where the old CAI expected the user to close his or her browser to log out, the new one has a log out feature. Its use is highly recommended for the obvious security reasons. Administrator sessions never expire, unlike team logins, which expire after a few minutes.

## 2.2 Team categories

Teams competing in the contest fall into only three categories in the new CAI.

- US/PR High School Students : PR is for Puerto Rico. This includes all grade 9 to 12 kids who are either attending US schools (regardless of national origin) or are US citizens (regardless of location or school choice including home-schooling).
- US/PR Middle School Students : This is the same as the High School category above, except for grade 6 to 8 kids.
- Open Competition : All people who are not US/PR High School or Middle School students.

US/PR Students, both Middle and High School, are eligible for recognition, advancing through successive contest rounds, and receiving prizes. Open competitors are in it for fun only.

Long-time contest participants will remember that categories once included the four ASCE zones. Also, the old CAI presented Semi-finalists as a category. Neither is currently true.

## 2.3 Team status

The status of a contest Team consists of four values. Each has an associated color to denote it in the CAI.

- Unreviewed (gray) : The team has successfully registered and uploaded at least one design, but no Administrator has yet reviewed or advanced it to one of the three reviewed states that follow.
- Rejected (red) : The team has been disqualified by an Administrator. Logins are permitted, but the Team Home Page contains only a message and links to change contact information or Log Out. No further uploads are possible. The contact information form for rejected teams includes an opportunity to change the team name so that a new registration is not needed when rejection is for bad team names.
- Accepted (green) : The team has been reviewed and deemed suitable to continue in the competition. It can appear in official standings if its best design has a high standing.

Semi-final (purple) : An Administrator has designated the team as a semi-final competitor. The status of such a team is identical to an Accepted team except that during the Semifinal period, its home page is augmented with Semi-final instructions and a chance to select between a Semi-Final-specific home page and the team's normal qualifying round page. In the old system, the Team could do the same by using either its normal or semi-finals-specific user id. Here, the normal user id is used for all.

Semi-final status should be thought of as "Accepted with benefits." A Semi-final team can continue to participate in local contests. Its local and national standings are unaffected by its semi-finalist status.

## 2.4 Local contests

Local contests are just collections of teams that have entered the same 4- or 6-character local contest code in the registration pages. Every team can enter up to four local contests of either type or delete them at any time. The system generates standings of all contestants for all local contests. These are updated every half-hour or so. Rejected teams do not appear.

Local contests have been run by teachers, home-school parent groups, principals, superintendents, college professors, states, and foreign countries. The person who wishes to run the local contest emails an Administrator to obtain a code. He or she is responsible to communicate this code to the local contest competitors, who enter it in their team registration information pages. Soon after successfully submitting a design (of the correct design scenario for a 6-character contest), the team will appear in the local contest standings.

## 2.5 Team groups

In the new CAI, team members can optionally be placed in named groups of arbitrary size. Therefore, each team is associated with zero, one, or two groups, depending on the groups of its members. When official standings are generated, a team will appear only if it has the best design in each of its associated groups.

## 2.6 Certificates

The CAI can produce Certificates of Achievement for the qualifying round (including a ribbon for semifinalists) and for each local contest. Up to five certificates may be awarded to each team—one for the qualifying round and another for each of up to four local contests.

These appear as links on the team home page. Clicking the respective link produces a PDF document in a fresh browser tab. Each certifi-



Table 1: Characters in likenesses.

Likeness character		Matches...
Percent sign	(%)	any string of zero or more characters
Underscore	(_)	any single character
Any other character	$x$	the same character $x$ , ignoring case.

cate is suitable for high quality printing and display in an  $8 \times 10$  inch frame.

Certificates must be explicitly posted by an administrator for each local contest and for the qualifying round. They may also be revoked individually for each local contest and for the entire qualifying round.

Most attributes of certificates are *frozen* at the time the administrator creates them. They do not change even if the team submits improved bridges or other teams with higher standings are rejected. Frozen attributes include the standing and *basis* (total number of competitors for the local contest or qualifying round, depending on certificate type). For the qualifying round, the group and standing within the team's group (if any) is frozen and also the basis within that group.

If the Administrator re-creates certificates, frozen values are updated.

Semifinalist ribbons not frozen. Updates to the semifinalist status of a team are reflected immediately in the qualifying round certificate.

Example certificates are presented in the Appendix, Section A.

## 2.7 Data likenesses

For several functions of the CAI, the user can enter a pattern known as a *likeness* to search for contest database records. A likeness is just text. When the likeness *matches* text in the database, the data record (for a team, local contest, group, etc.) containing the text is reported as a search result. Otherwise it is not. Likenesses are powerful because they assign special meaning to two characters: percent (%) and underscore (\_). These obey the rules shown in Table 1.

For example, `%s%hwa_%z` will match Jerry Schwartz, Jansy Ohwaraz, and many other data.

## 3 Login and pattern of use

The CAI login is available at the server address followed by `/admin`, currently

`https://judge.bridgecontest.org/admin`

Enter your Administrator login and password and press the **Log In** button.

Maximize your browser window, and note it is divided into two panes: the *menu pane* on the left and the *display pane* on the right. The general pattern of CAI use is to initiate a function by making a selection in the menu pane and then continue it by reading and interacting with the display pane. When the menu item includes a select box, merely changing the selection often invokes the selected function. When this doesn't happen, or you wish to re-display the current selection, perhaps after selecting new options, press the **Go** button for the function.

## 4 Options

Nearly all CAI functions respond to the **Options** selectors at the bottom of the menu.

### 4.1 Review and standings cutoff

Various CAI functions present lists of contest team records as review boxes and standings. The maximum number of records displayed is set in this option.

### 4.2 Visible attributes

Various CAI functions present *review boxes*, one per team. (See section 6.3.) The boxes contain items of current team information called *attributes*. The visibility of each attribute may be switched on and off with the **Visible attributes** selector. On Windows computers, hold the Control key down while selecting and de-selecting attributes with the mouse. On Apple computers, hold down the Command key. Otherwise all attributes will be cleared except the last selection. Use the buttons next to the selector to select all, clear all, or reset the selector to its default values. The available attribute names are self explanatory and correspond to information provided by teams on their registration forms except for a few explained in section 6.3.3.

For technical reasons, the review display will take considerably longer to compute (perhaps a full second on the server side) if the **Local contests** and/or **Best design** attributes are selected. Consider turning them off if the information they provide is not needed.

### 4.3 Visible teams

The **Visible teams** selector determines which teams are shown in the functions that retrieve lists of view boxes. The selector items **Unreviewed**, **Accepted**, **Rejected**, and **Semi-final** cause teams in the respective statuses to be shown when the item is selected and not shown

when de-selected. The **Hidden** item refers to teams that are in an **Accepted** status but have no rank in official standings because the team's best design is not at the top of at least one member's group. On Windows computers, hold the Control key down while selecting and de-selecting items with the mouse. On Apple computers, hold down the Command key.

## 5 Maintenance functions

The top row of menu links consist of functions to check, control and maintain the Administrator's use of the CAI.

### 5.1 New password

This menu item presents, in the display pane, an opportunity for the the Administrator to change his or her CAI password.

### 5.2 Server

Selecting this menu item fills the display pane with information about the current state of the contest servers (there are five of them).

It also contains an experimental interface for clearing the contest database. For security reasons, this function is currently not operational.

### 5.3 Schedule

This menu item causes the display pane to be filled with the *schedule manager*. The schedule manager controls what users see at the contest login page and, after they are logged in, what they are able to do. It does so indirectly by allowing the administrator to specify a set of key date-times and other bits of information. Overall, the manager has four related purposes.

- Starting and stopping the various rounds of the contest.
- Posting and revoking Certificates of Achievement (see Section 2.6) for the qualifying round.
- Re-enabling logins after they are automatically turned off as the qualifying round ends.
- Temporarily disabling and re-enabling all logins with a banner message.

These are obviously powerful functions, so the schedule manager must be used with great care.

Table 2: Contest schedule information.

Schedule item	Type	Description
Name	text	unique identifier for the schedule
Active	checkbox	checked for the currently active schedule
Start registration	date	users may register and log in but not submit designs
Start qualifying	date	users may register, log in, and submit designs
End qualifying	date	logins disabled until the <b>Tally complete</b> box is checked
Tally complete	checkbox	when checked, logins are re-enabled after qualifying round end
Start semifinals logins	date	semifinalists can log in to either home page but not submit semifinal designs
Semifinals instructions	document	instructions page presented at each semifinal login
Start semifinals	date	semifinalists can log in only to semifinal page and submit designs
End semifinals	date	semifinalists can log in only to their regular home page
Suspend logins	checkbox	all logins are temporarily suspended
Banner message	text	displayed at login page while logins are suspended

A schedule consists of a list of sequential dates and other information shown in Table 2. This table depicts the flow of an annual contest cycle. Banners on the login page indicate the current status. For example, before qualifying round registration begins, the banner gives the start date and encourages people to return. After all rounds are complete, the banner exhorts teams to submit designs for fun and return for next year’s qualifying round.

Any number of schedules may be prepared in advance using the *schedule workspace*. The workspace displays the values of one schedule—either a new one that is being created or an existing one that is being updated. Buttons at the bottom of the manager have functions described in the following paragraphs.

### 5.3.1 Add schedule/Update schedule

If the schedule workspace contains a new schedule, fill it in with schedule information and press **Add** to save the schedule in the contest database. If the workspace contains an existing schedule, make changes and press **Update** to save them in the contest database.

If you add or update a schedule with **Active** checked, the schedule becomes immediately effective. The old active schedule is automatically deactivated.

### 5.3.2 Get new or selected schedule

To clear the workspace and fill it with a new schedule, ensure no review box is selected and press this button.

To retrieve an existing schedule into the workspace, select its review box and press this button. If more than one review box is checked, only the first will be retrieved.

### 5.3.3 The active schedule and disabling logins

At most one schedule can be active. If no schedule is active, then logins are disabled. Activate any schedule by getting it into the workspace, checking the **Active** box, and pressing **update**. The change is immediately effective.

To change the active schedule in any manner—for example, to suspend team logins temporarily—retrieve it into the workspace, make the desired changes, and press **Update**. The change is immediately effective.

### 5.3.4 Certificates for the Qualifying Round

Buttons to post and revoke Certificates of Achievement for the qualifying round (see Section 2.6) are presented in the schedule workspace. Pressing them initiates background processing that eventually creates, re-creates, or deletes certificates for all qualifying round teams that have submitted at least one design.

These buttons are positioned visually between the qualifying round end date-time and the "Tally Complete" check box because posting of qualifying round certificates is most logically done during the period that the system is closed for qualifying round results tallying. However, they can be used at any time.

### 5.3.5 Delete selected schedules

To delete schedules, select all their review boxes and press this button once. You'll be asked if you're sure you wish to proceed. Deletions cannot be undone, so be sure. The active schedule cannot be deleted.

## 5.4 Fake login

Select this option to obtain a team login and registration page for either the qualifying or semifinal round even if the contest is otherwise closed for logins according to the active schedule. Until the qualifying round is over, the login will be as for qualifying round. Afterward, it will be for semifinals. In this pseudo round, you can register teams and submit designs until the administrator session is terminated by

logging out or closing the browser. All pages in a Fake session will have the banner **\*\*\* Admin Session: Qualifying round in progress \*\*\*** until the real qualifying round over, when it will become **\*\*\* Admin Session: Semifinals in progress while also open for free play \*\*\***. This is a reminder that the normal schedule is being ignored because an administrator is logged in.

## 5.5 Logout

This menu item terminates the Administrator's session with the CAI.

## 6 Team review

This section describes the CAI's support for reviewing teams and advancing them from the Unreviewed status to one of the three reviewed ones: rejected, accepted, or semi-final. The status of a team may change more than once as the contest proceeds including "backward" to the unreviewed status.

Review begins by selecting a category from the CAI menu using the box labeled **Review (Accept/Reject) top teams**. Press **Go** if necessary to fill the display pane with review boxes for the top  $N$  teams, where  $N$  is the number in the **Review cutoff** selector.

### 6.1 Index

The index at the top of the display is a table of marks, one per review box. The mark is a numeric *standing*, an x, or an o, depending on the status of the team. The mark is also a link. Clicking it scrolls down to the respective team review box. Each review box header contains a [top] link to scroll back to the index. The mark is an x if the team's status is unreviewed or rejected. Otherwise the team has a status of accepted or semi-final. In these cases, the mark will be the numerical standing of the team nationally in its category unless the best design of a team is not at the top of at least one of its members' groups. In this case, the mark is an o. See Section 2.5 for more on groups.

### 6.2 Processing

Immediately below the index is a button marked **Process**. After a review is completed by changing status and group settings as described below in section 6.3.2, press this button to record them in the database.

Any number of changes will be recorded by a single press of the button. They take effect immediately. For example, teams that are rejected will no longer be able to submit designs, and their home pages will show a message explaining that they've been disqualified.

## 6.3 Review box

Each team is described by a review box. The box also includes controls to change the team's status. Parts of the review box are explained in subsequent paragraphs.

### 6.3.1 Standing bar

The standing bar is the left border of the review box. Its color and mark match its Index entry as describe above.

### 6.3.2 Heading

The heading is the top border of the review box. It contains both information and controls that record your review of the team.

**Name key** This is the team name with all but letters and digits removed and letters converted to lower case. The system ensures that name keys (not just team names) are unique in any contest round. If the name key text is red, the Administrator should inspect it carefully, because this means the CAI has detected that at least one of the members' family names is embedded in the team name. Green highlighting shows the characters that must be inserted in the family name to obtain the team name. For example, if the team name is **\*\*SxMxlTxH\*\***, and one of the members is named Smith, then the name key will be portrayed as **sxmxi~~tx~~h**, with the xes highlighted in green.

**Unofficial standing** This shows the unofficial standing that will be reported to the team on its home page. Unofficial standings assign a standing to a team regardless of its status unless it is rejected. They also ignore team groups. Official standings for the national contest show only teams that are in the accepted or semi-final status, and they award a standing only to the top team in each group. Due to the differences between the two ways standings are computed, official standings are often better (that is, the ranking number is smaller) than unofficial ones.

**Group selectors** Groups are explained in Section 2.5. These controls—one per team member—are used to assign team members to groups. They present all groups in the contest as a menu. (See Section 11, Administering groups.) To add a team member to a group, merely change the corresponding selector from **No group selected** to one of the other choices. You can reverse this at any time by re-choosing **No group selected**. Don't forget to press **Process** to record your changes.

**Status selector** The current status of the team may be changed by selecting the appropriate radio button. Changes take effect immediately after the **Process** button is pressed. Email messages to teams are automatically generated under the following circumstances:

Disqualification : The team's status changes to rejected from some other status.

Qualification : The team's status changes to either accepted or semi-final from another status that's not either of these two.

These messages are personalized for the team, but their contents are currently "hard wired" into the CAI. Editing them requires coordination with the CAI author.

**Top link** This is just a link that causes the display pane to scroll all the way to the top. Normal uses are to reach the index in order to skip to a different team's record and to display the **Process** button so that status or group selector changes can be recorded in the database.

### 6.3.3 Attributes

The rest of the review box lists attributes of the team in tabular form. The visibility of attributes may be changed using the **Options** selector in the menu pane. These attributes are taken directly from information provided by the team during registration with a few additions as follows:

Status : The current status of the team, which is also visible in the color of the *standing bar*.

Registration : The date and time team registration was completed.

Best score : The cost of the least expensive bridge submitted by the team so far.

Best design : A small sketch of the best bridge submitted by the team with links to a corresponding *structural analysis table* and *bridge file download*. The table format is identical to the West Point Bridge Designer's. Bridge file downloads may be opened by the Bridge Designer.

Best semifinal design : Same as above, but for the best semifinal design of the team, if any.

For technical reasons, the review display will take considerably longer to compute (perhaps a full second on the server side) if the **Local contests** and/or **Best design** attributes are visible. Consider turning them off if not needed.



## 7 Standings preview

This section describes the CAI's support for previewing official standings and posting the latest so they are visible on the contest web site. There are five categories of standings.

US/PR High School : High school teams eligible to win prizes according to the contest rules.

US/PR Middle School : Middle school teams eligible to win prizes according to the contest rules.

Open competition : Teams competing for fun, ineligible to win prizes.

Combined : Top teams from US/PR high and middle schools, plus Open standings combined in a single set.

Semi-finalists : All semi-finals teams (who have submitted a bridge) ranked by their semi-final entries only.

Standings preview begins by selecting a category from the CAI menu using the box labeled **Preview new standings from database**. Press **Go** if necessary to fill the display pane with new standings. Note that one category choice is **Combined US/PR-Open**. This produces standings that combines open competitors and all kids eligible for prizes in a single listing. It is normal to update this scoreboard each time one of the others changes.

### 7.1 Standings options

The preview **Options** selector has the following items:

Normal : Normal standings are produced.

Include scores : Standings that include bridge costs are produced. The intent of this option is to discourage bridge submissions by making the scores of the leaders obvious. This is an emergency safety mechanism for reducing load on contest servers.

Not available : An empty standings list stating that scores are not available is produced. The intent of this option is to temporarily make standings unavailable in cases of a scoring irregularity.

Additionally, the **Difference** check box controls whether the review version of standings includes “difference marks” showing changes with respect to the currently posted standings. These are explained in the paragraph below.

### 7.2 Difference marks

Difference marks are color codes and strikeouts that show parts of the review standings that are insertions or deletions with respect to

the previous one. Insertions are highlighted in green. Deletions are highlighted in red and also “struck out” with a single horizontal rule. Thus the first standings of the contest will be entirely highlighted in green. Difference marks are *never* visible in posted standings. They are visible only in the CAI. When difference marks are turned off with the **Standings options** as described above, the standings appear exactly as they will when posted. Posting is the subject of the next paragraph.

### 7.3 Post button

The **Post now!** button at the top of the review standings publishes these standings, making them instantly visible to all users of the Bridge Contest site. There is no way to retract published standings. “Not available” standings, described above, may be published after erroneously published standings to immediately hide them from view. Alternately, fix the error and post new standings. After posting, the display pane contains the new standings with no difference marks.

## 8 Current standings

The **View currently posted standings** selector fills the display pane with the most recently posted standings, which are also visible to all users of the Bridge Contest site. The selector determines the category of standings shown.

## 9 Finding any team

This menu selection searches the contest database for any team name described by its *likeness*. Review boxes are displayed with a **Process** button. One important purpose of this function is to reject a team in a local contest that otherwise would never appear in a top teams review. Local contest POCs sometimes make such requests. Rejected teams are omitted in local contest standings.

The “any team” search may optionally be restricted to one desired category by selecting it in the **Category** box.

## 10 Administering local contests

This menu selection opens the *local contest manager* in the display pane. The top portion of the manager consists of a *workspace*. The workspace can contain either an existing record or a new record that is being created but has not yet been saved in the contest database. If the workspace currently holds an existing record, the heading of the workspace will be **Edit/query local contest**. For a new record it will be **New/query local contest**.

The organization of the workspace is new. Because its state is always clear, the new CAI can avoid inadvertently writing over an existing local contest with a new one. An attempt to save a new local contest with the same code as an existing one will produce an error message.

The bottom portion of the local contest manager display is a list of local contest review boxes sorted according to local contest code. Unlike team review boxes, there are no options to control visibility of local contest attributes. All are visible. Each review box includes a check box that *selects* the respective local contest.

At the bottom of the workspace are several buttons that control its functions. These are explained in the following paragraphs.

### 10.1 Add record/Update record

If the workspace contains a new record, fill it in and press **Add** to save it in the contest database.

If the workspace contains an existing record retrieved earlier, make any desired changes and press **Update** to save it in the contest database.

### 10.2 Get new or selected record

To clear the workspace and fill it with a new local contest record, ensure no review box is selected and press this button.

To retrieve an existing record into the workspace, select its review box and press this button. If more than one review box is checked, only the first will be retrieved.

### 10.3 Query by example

The list of review boxes can be restricted with the *query by example* feature of the workspace. In any desired workspace field, enter a likeness that matches the desired local contests and press the **Query by example** button. After this, only records that matched the query (along with any you add in the future and omitting any that you delete) will be shown.

To erase the query and once again see the full local contests list, just re-select the **Local contests** function in the menu pane.

### 10.4 Sending standard email

When the workspace contains a local contest with a valid email address, two additional controls are visible—a **Send email** button and a **Select document** list. Their purpose is to send a standard instructional email to the local contest point of contact explaining how their

local contest code is to be used. To send email, select a document and press the button.

Preparation of local contest email documents is described in section 13.

## 10.5 Operations on selected records

### 10.5.1 Delete

To delete local contests, select all their review boxes and press this button once. You'll be asked if you're sure you wish to proceed. Deletions cannot be undone, so be sure.

If a local contest is deleted, it automatically disappears from the local contest lists of all teams in the database. Even if it is recreated with exactly the same information, all participating teams must re-enter the local contest code in their registration pages.

### 10.5.2 Posting and revoking certificates

To post certificates for one or more local contests, select their review boxes and press the Post button once. You'll be asked if you're sure you wish to proceed. Certificates are produced for each local contest team that has submitted at least one bridge and that is not in the Rejected status. A standard email notification is automatically sent to the local contest Point of Contact when certificates are posted.

Revocation is similar. Merely press the Revoke button. No email message is sent to the Point of Contact in this case.

## 11 Administering groups

Use the **Groups** menu item to display the *Group manager*. It works in a manner identical to the local contest manager with the minor exception that a group has only one data field—its name. Therefore, review boxes are replaced with one line per group. Refer to the previous paragraphs for instructions on operating the group manager.

## 12 Finding local contest teams

Use this menu option to fill the display pane with review information for all the teams in a specific local contest. Enter a valid code in the **Local contest code** field of the menu and press **Go**. This field does not accept a likeness. Review and change status in the usual manner and download spreadsheet data for the displayed information.

Table 3: Local contest instruction document escapes.

Escape	Meaning	Example
[year]	contest year	2042
[poc]	full name of point of contact	Jane Q. Jones
[code]	local contest code (4 or 6 characters)	WVBD
[description]	local contest description	West Virginia State Contest

## 13 Document management

Select this menu item to fill the display screen with the *document manager*. This part of the CAI maintains any number of documents that the system can send as bulk email and use as Semi-final Round Instructions. Each document is stored by a Subject, which must be unique. The Subject is used as the subject line in bulk email.

### 13.1 Creating and editing documents

The document manager works in a manner identical to the local contest manager except that the query by example facility (see section 10.3) works only on the document Subject, not on its text. Refer to the previous paragraphs for instructions on operating the group manager.

The current document manager allows pictures to be inserted in documents. This feature should be used only for Semi-final Round Instructions. It will not work correctly for bulk email. This issue could be resolved in the future.

### 13.2 Local contest instructions

Any document containing the words “local contest” in the Subject will appear in the **Select document** menu of the local contest manager whenever the **Send email** button is visible. The purpose of such documents is to provide standard instructions to local contest points-of-contact when local contest codes are issued to them.

These documents can contain *escapes* that resemble mail merge fields in standard word processors. Table 3 shows the allowable escapes and their meaning. Escapes may appear any number of times in any local contest instruction document.

## 14 Bulk notices

Use this menu option to fill the display pane with the *bulk notice manager*.

## 14.1 Sending

Sending bulk notices as email requires four steps:

- Prepare a message using the document manager.
- In the bulk notice manager, select the subject of the document to be sent.
- If necessary, enter supplementary information.
  - For test messages, enter a test email address.
  - For messages to local contests, select the correct description.
- Press the appropriate send button:
  - **Test email.** Sends the specified email to the address of your choice for appearance testing purposes. A “test team” with this email address is temporarily fabricated for the recipient, then destroyed.
  - **Reminder requestors.** Sends to all qualifying round reminder requestors.
  - **Local contest.** Sends to all participants in the specified local contest.
  - **Semi-finalists.** Sends to all teams designated as semi-finalists.

The previously available option to send email to all contest participants has been removed. The registration subsystem does not require teams to validate their email addresses. Therefore, the fraction of bad email addresses in the contest database is usually over ten percent. This is too high to honor our agreement with the contest’s email service.

Sending will begin almost immediately, but completing the job will take time proportional to the number of messages sent: roughly one second for two messages under most conditions. This happens

Sending a test message to verify the appearance and content of every bulk message is highly recommended!

## 14.2 Reminder requests

The bulk notice manager displays the current content of *reminder request* boxes, which may be inserted in as many Internet web pages as desired, including the Bridge Contest web site itself. Instructions and the necessary HTML code is given below the exemplar. The purpose of the boxes is to enable potential contestants to request an email when the next contest qualifying round begins.

Reminder request box contents change automatically with the contest schedule. The email field and button are visible from the time a new AY schedule is made active until the qualifying round starts. During other periods, an appropriate message is displayed asking the user to return for next year's qualifying round.

### **14.3 Clearing reminders**

The bulk notice manager includes a button to clear the database of reminder requests. Normally, this will be used as soon as reminders have been sent. Clearing reminders cannot be undone.

## **15 Other CAI details**

Following are additional points that are likely to be useful for answering user questions.

### **15.1 Abandoned registrations**

When a team begins registering but never completes, the partial registration remains in the contest database for approximately one hour, when it is automatically deleted. Until this occurs, the team name is unavailable. Attempts to use it will result in an "already in use" error and request to pick a different name. After a one-hour delay, the team name can be successfully registered.

### **15.2 Rejected team name changes**

When a team is placed in the rejected status, its name becomes editable on the team contact information page. The disqualification email sent to the team includes this information. This allows teams disqualified for inappropriate team names to repair the mistake on their own without registering a different team. If the team is later moved to any other status, the team name is no longer editable.

### **15.3 Password resets**

The new CAI, unlike the old one, stores passwords in an encrypted form only. Therefore it is impossible to tell a team its password. A standard password reset mechanism has been added. There is a "Forgot your team name or password?" link just below the contest login box. Selecting it produces a request for the team to provide the email it entered at registration. All teams associated with this address are included in a single password reset message with a "Log in" link for each. Since the team email is available in the CAI, an administrator can use it to request a reset message on behalf of the team.

Table 4: Standings scoreboard addresses.

High school teams eligible for prizes	/standings/highschool
Middle school teams eligible for prizes	/standings/middleschool
Open competitors	/standings/open
Combined scores	/standings/combined
Semi-finalists	/standings/semifinal
Local contest ABCD	/standings/local/abcd

Table 5: Participant distribution maps.

523x355	/maps/usa50
1046x710	/maps/usa
2092x1420	/maps/usa200

It may eventually be necessary to present a *captcha* in order to prevent abuse of this function.

#### 15.4 Contest standings scoreboards

These are available at the contest web site address with the additional path information shown in Table 4.

#### 15.5 Local contest scoreboards

Local contest scoreboards are updated periodically, currently every one-half hour. This is subject to change.

#### 15.6 Maps of US participants

For purposes of reporting, simple maps depicting the geographic distribution of participants are prepared at intervals of six hours by the system. They are available in several sizes shown in Table 5.

### 16 Future possibilities

This section of the document is a list of possible future features for the CAI. It is a work in progress.

#### 16.1 More Document-based email

Message text for team disqualification, qualification, and password resets are currently “hard coded” into the system code. It would be possible to base these on editable documents if this is a desirable feature.



## **16.2 Pictures**

The document editor supports pictures, but these won't currently work if used in email messages. This could be fixed.

## **16.3 Captchas for password resets**

A malicious user could cause trouble with our email service provider by automatically sending many password reset emails to one or more contestants. Captchas would reduce this threat.

## **A Examples of Certificates**

Example certificates of achievement are included on the following pages. The first is for a local contest. The second is for the national qualifying round, provided by a team that was part of a group.

The Engineering Encounters

# Certificate of Achievement

is awarded to

**Team Beat Navy!**

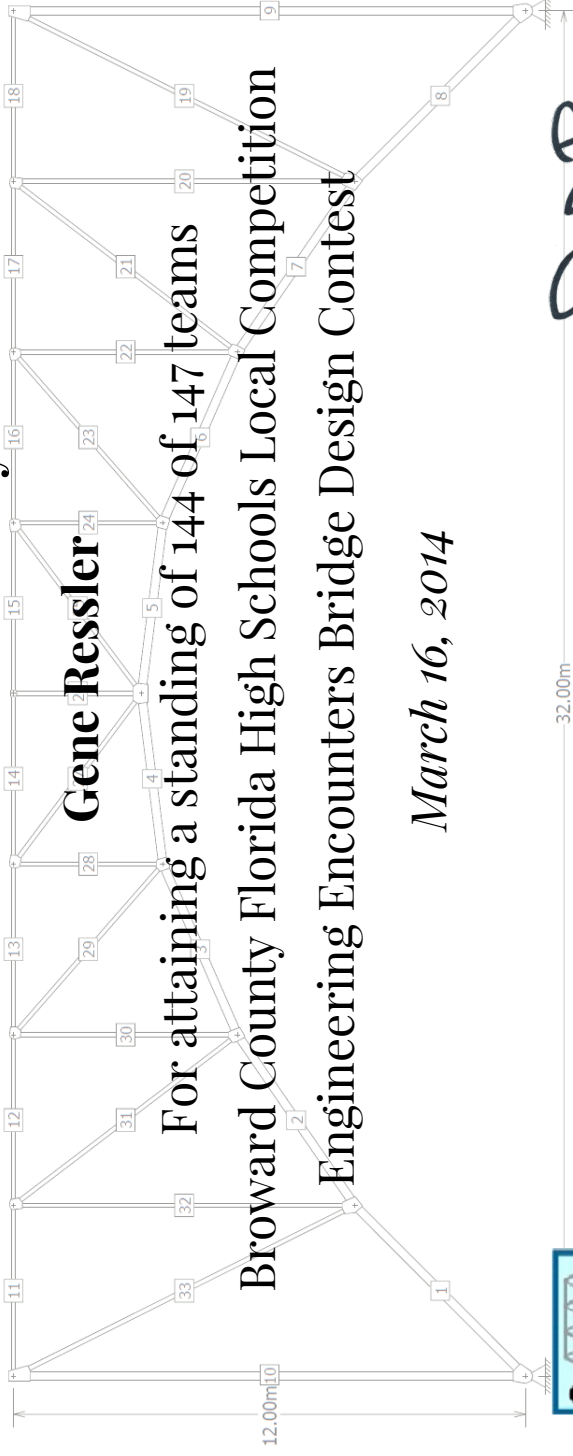
**Gene Ressler**

For attaining a standing of 144 of 147 teams  
Broward County Florida High Schools Local Competition  
Engineering Encounters Bridge Design Contest

*March 16, 2014*



Engineering Encounters  
Certified



A handwritten signature in black ink, reading "Step Ressler".

Stephen J. Ressler  
Contest Director

The Engineering Encounters

# Certificate of Achievement

is awarded to

**Team Beat Navy!**

**Gene Ressler**

For attaining a standing of 704 of 995 teams

And 24 of 24 teams from Redwood

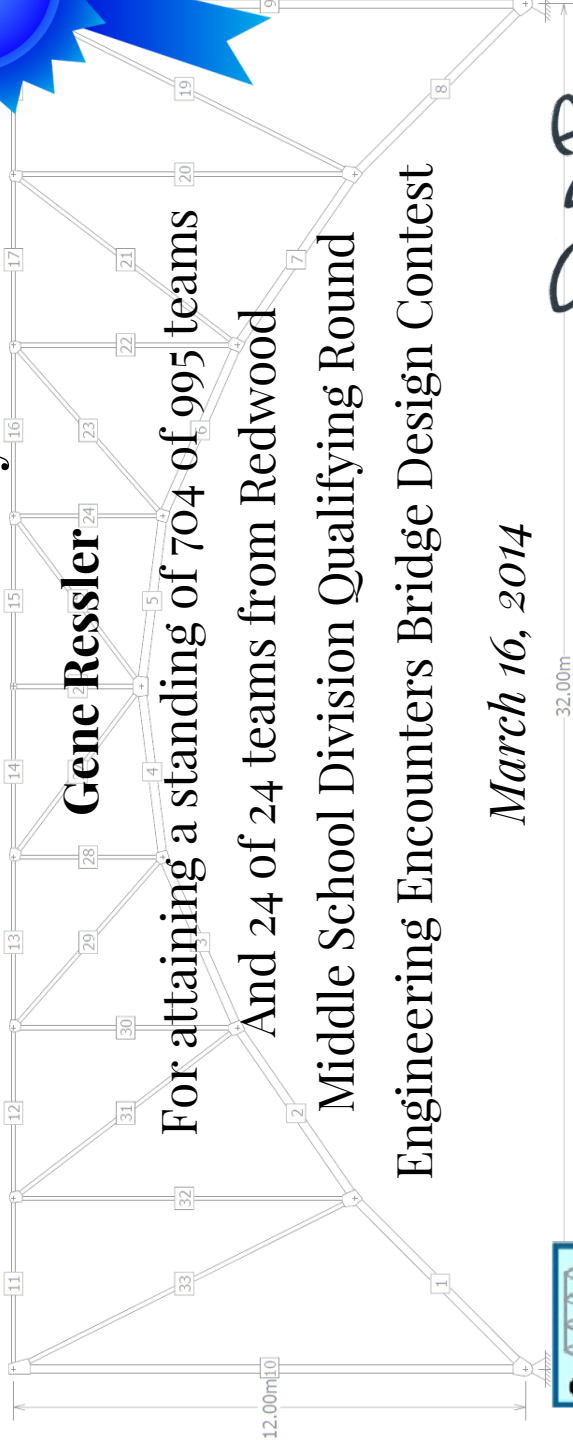
Middle School Division Qualifying Round

Engineering Encounters Bridge Design Contest

*March 16, 2014*



Engineering Encounters  
Certified



*Steph Ressler*  
Stephen J. Ressler  
Contest Director