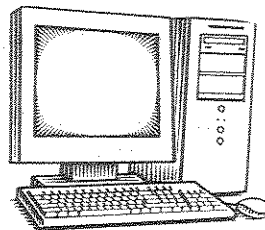


**DESCRIPTION:** This event integrates Personal Computing (PC) technology, the Internet, and quantitative data analysis. Teams are presented with a problem that requires quantitative data capture from the public Internet and the organization and presentation of data in a graphical format. Short answer questions related to the problem are also included.



**A TEAM OF UP TO:** 2

**APPROXIMATE TIME:** 50 Minutes

**THE COMPETITION:**

1. During the competition, each team will be provided with a single **IBM Compatible PC** with word processing (MS Word), spreadsheet (MS Excel), WWW browser (MS Explorer), and Internet access. **If an Apple/Mac platform will be used, the tournament director will notify teams.**
2. Teams will be given a problem in the area of **oceanic and atmospheric science**, and all the required information **will** be located on web sites within the **<http://www.noaa.gov/>** domain.
3. The problem statement will require the capture of quantitative information from the Internet followed by spreadsheet data entry and graphical presentation. A specific chart format (e.g., line chart, pie chart, stacked column chart, etc.) will be defined in the problem statement. All charts must include labeling for each axis (including units of measure) and legends to properly label data within the chart (i.e. elements within a pie chart, multiple lines in a line graph, etc.). Division C teams may also be asked to include best-fit trendlines, and to display the trendline equation and  $R^2$  value, when XY charts are specified.
4. The problem statement will also include up to five (5) short answer questions. Questions may involve analysis of data previously collected or require additional facts to be gathered via Internet search. Where additional searches are required, teams will be asked to list the specific, source URL associated with each answer. The URL must be complete and **must point to information within the <http://www.noaa.gov/> domain.** Division C teams may also be asked to use specific statistical functions in Excel (AVERAGE, MEDIAN, FREQUENCY, PROB, SLOPE, INTERCEPT, LINEST, LOGEST, FORECAST, GROWTH, NORMDIST, STDEV) to further analyze data that they have collected. **At the national tournament only, Division C teams may also be required to develop Excel VBA code as part of a short answer question.**
5. Teams will construct an MS Excel (.xls) file which contains the data tables and graphics associated with the problem and an MS Word (.doc) file which contains the answers and URL's associated with the short answer questions. The event supervisor will specify how these files are to be submitted at the conclusion of the event. Teams should include their school name and team number (as appropriate) within both files to ensure proper identification by the event supervisor.
6. No resource materials (e.g. reference books, cards, etc.) or handheld calculators may be used during the competition. Blank tablet paper and writing instruments may be used to assist teams in organizing their thoughts, if desired. Prior to the event, teams may construct their own publicly accessible (non-password protected) websites to organize URL links and reference information for use during the competition. **Teams may also use any publicly accessible www search engine or resource (e.g., Google) to locate information within the <http://www.noaa.gov/> domain.** However, during the event, no external communication is permitted with other individuals via e-mail, chat rooms, or other forms of collaborative computing; the penalty for an infraction of this nature will be immediate disqualification.

**SCORING:** High score wins based on 1. Completeness and Accuracy of Quantitative Data Collected 20 Pts. 2. Completeness, Accuracy, and Format of Graphical Data Presentation 30 Pts. 3. Answers and URL's Associated with Short Answer Questions 50 Pts. The tiebreakers shall be: (1) The number of short answers questions correctly answered, (2) The completeness and accuracy of quantitative data collected, and (3) The overall quality of graphical data presentation. Additional event information, sample problems, and supervisor guidance may be found at [www.soinc.org](http://www.soinc.org).

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