Geomet

Universal CMM Software

GeoTracker

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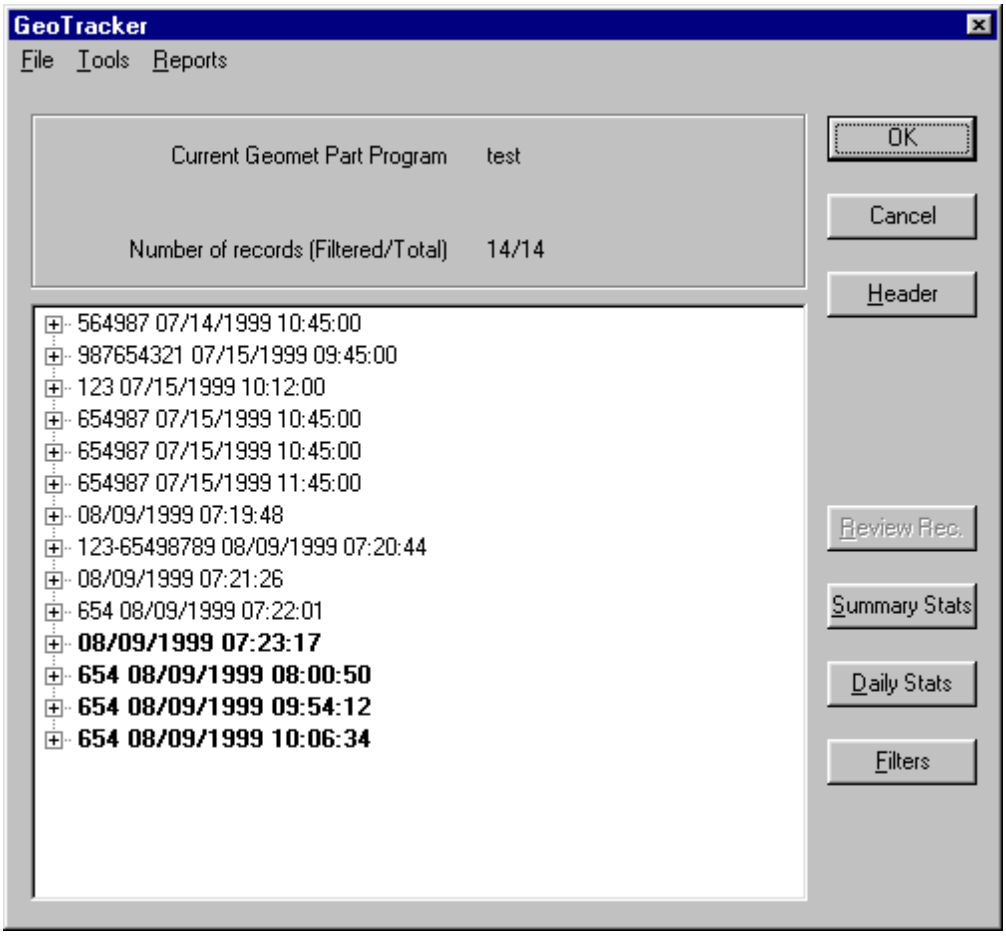
Reporting of Inspection Results

Introduction

GeoTracker is the reporting function offered by Geomet to summarize the history of a part inspection. GeoTracker is a separate program, which is offered and activated through the use of access codes inside Geomet 301. If you have not purchased GeoTracker, please contact Helmel Engineering for the latest information and revision level.

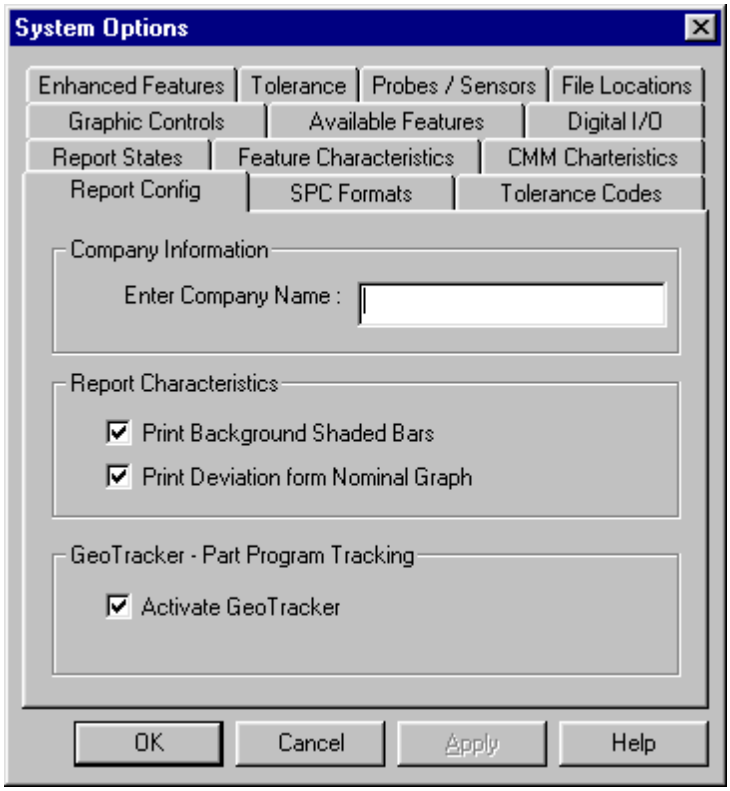
GeoTracker will maintain a database of summarized inspection results. These results include start and stop times of an inspection cycle, the operator, CMM utilization, and results of Process Control Tolerance.



Activating GeoTracker

To activate GeoTracker you should first enter your Access Code into Geomet, *see Entering Access Codes*. The next step is to activate GeoTracker's functionality through Geomet's System Options <F9> and Select the "Report Config" tab.

Place a check next to the "Activate GeoTracker" and left click on <OK>.



GeoTracker will now be activated and will remain on until you remove the check.

Data Acquisition

The capturing of data is automatic inside Geomet. Once the GeoTracker has been activated, every inspection will be recorded in a separate sub-directory using the main inspection file name *myfile*.GTR. For example your inspection is called Widget.GMT your GeoTracker summary will be called Widget.GTR.

When Geomet runs a part program it will record the following data:

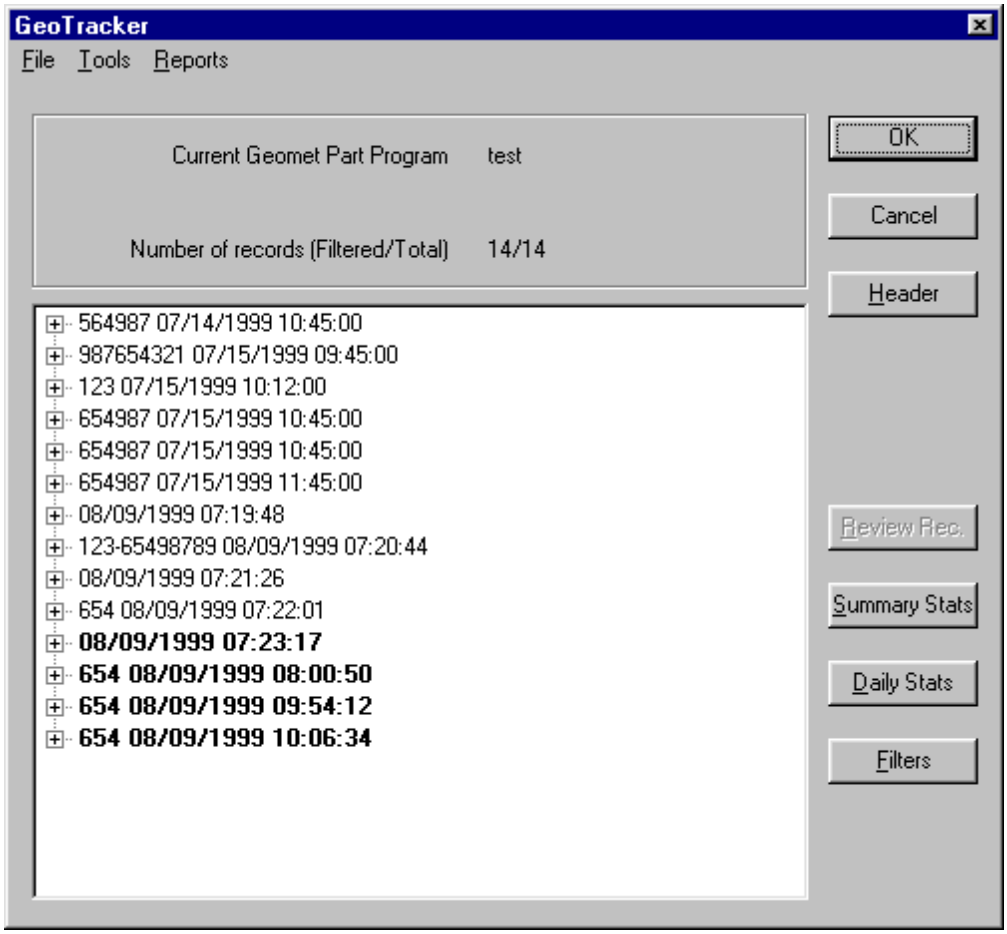
- Operator that inspected the part.
- Serial Number (if any)
- Date the inspection occurred.
- Time the inspection started.
- Time the inspection was completed.

- Number of attributes inspected.
- Number of Out-of-Tolerance conditions which were found. (Note: these counts are Out-of-Tolerance conditions of basic dimensions that are not controlled by Process Control Tolerance.)
- Number of attributes that fall into Process Control Tolerance zones A/B/C and D.

It should be noted that GeoTracker will not verify that the file name is recycled and that the results no longer match up with a previous inspection.

Viewing GeoTracker

You can access the functions of GeoTracker by selecting from the pull-down menu [Report Controls -> GeoTracker]

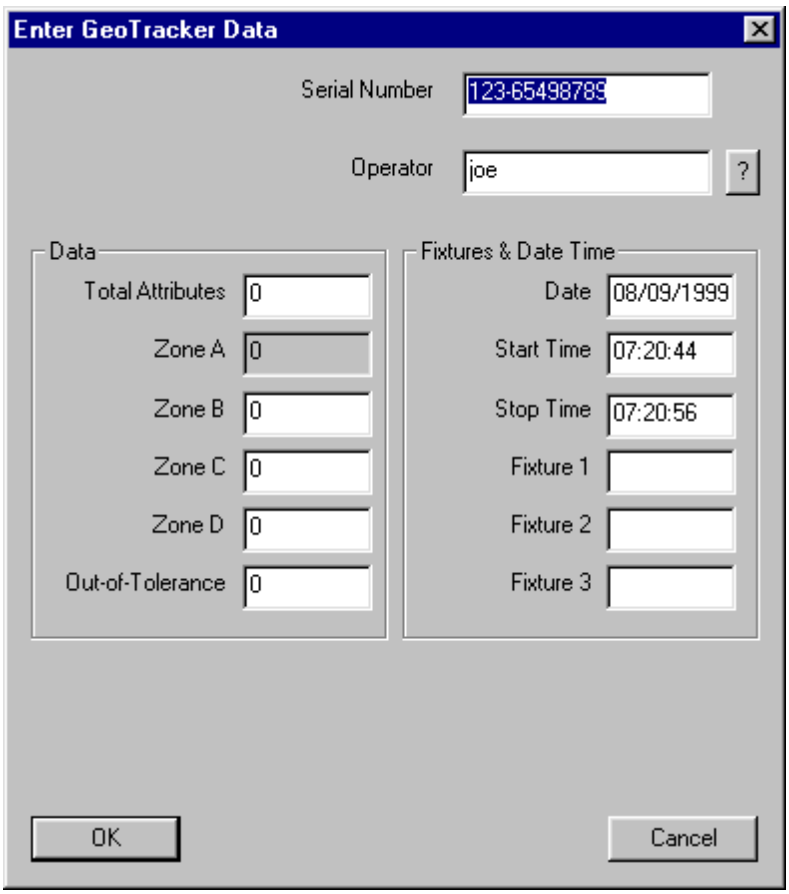


GeoTracker will open the current database and display the results as shown above. As you can see, some entries are shown in bold. These entries contain one or more non-conformance values that are indicated in Zones B/C/D and Out-of-Tolerance.

Every entry in the list can be expanded by left clicking on the + located next to the entry or by double-clicking directly on the entry.

Reviewing or Editing an Entry

To review or edit the entry, highlight it by left clicking on it and select the <Review Rec.> button. A dialog box will appear allowing you access directly to the entry in the database.

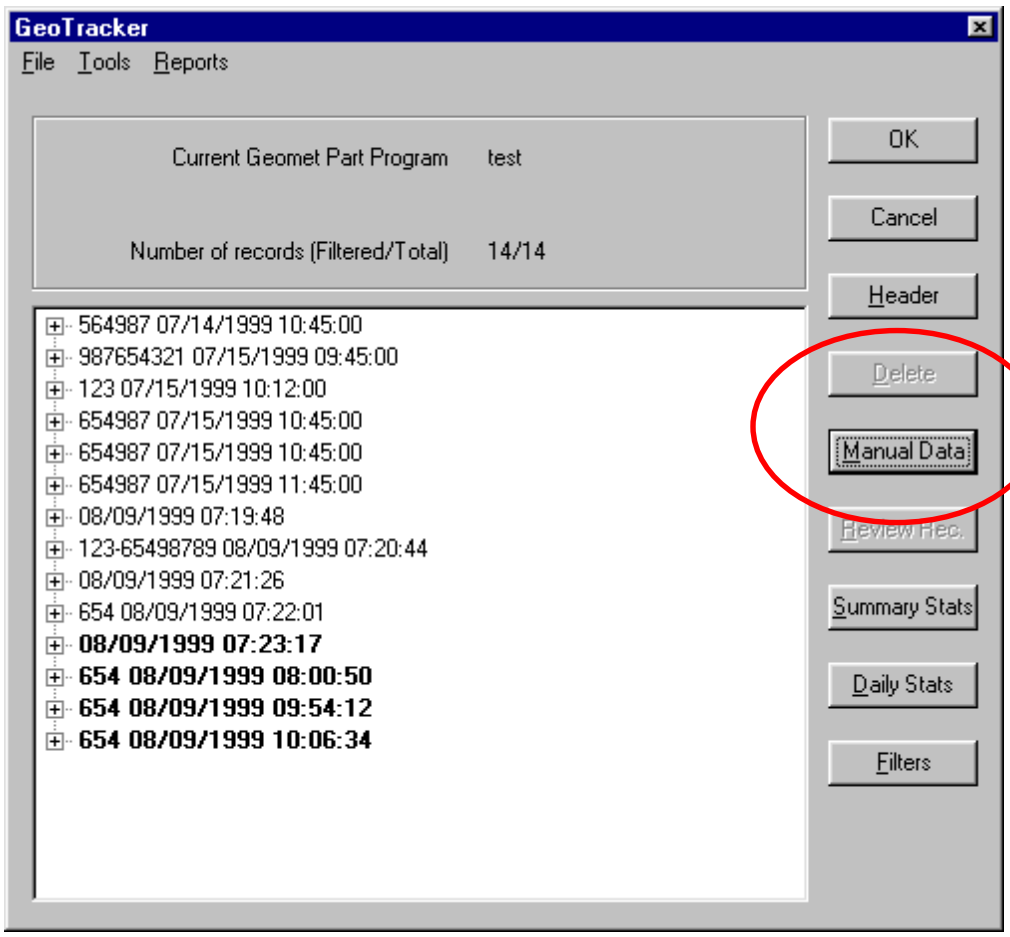


GeoTracker provides a quick look-up on fields that are critical to sorting and searches. One of these fields is the Operator. Next to the operator you will find a [?] button that will provide a quick list of all unique names associated with this database.

Select from this quick list the desired name and press the <OK> button or double click on the name and you will be returned to the preview record dialog box bringing the selected name with you.

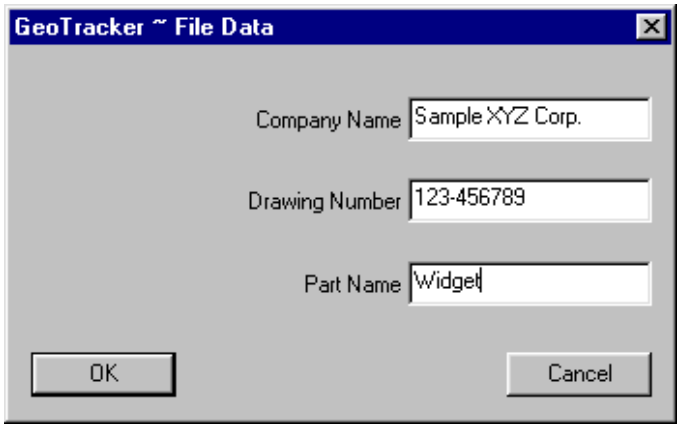
Manual Operations

You can enter summarized inspection results directly into GeoTracker by selecting the <Manual Data> button. This function requires that you activate the edit tools through the Tools pull down menu. After you have activated the edit tools, GeoTracker will make available two additional functions: Delete Record and Manual Data. As it implies, you can delete from the database the currently selected record.



GeoTracker Header

Each database can have a header record attached to it. The information stored in the header record contains the name of the company attached to the drawing, the drawing number and part name. This data is used on all reports generated by GeoTracker.



Applying Filters

GeoTracker allows you to apply filters, which will display and summarize only the data matching the filters attached. To access the filters select from the pull down menus [Tools -> Filters].

From the filter dialog you can enter any combination based on start and stop dates, operator, fixtures, serial numbers of PCT zones. When more than one field is used it performs the filtering as an "*and*" condition where *x and y* must exist within the record to be displayed.

Entering Dates

Special note on entering data in the Date Filters fields. You must enter a correctly formatted date in the start field using mm / dd or mm / dd / yy or mm / dd / yyyy. If you omit the year it is assumed the current year. In the stop field you can enter the ending date as previously defined or you can enter +*number* that indicates the number of days to filter. For example a +1 would filter for the same date as the start date, a +2 would filter for the start date and the next day.

Entering from Quick Lookup Lists

Operators, Fixtures and Serial Numbers provide a quick list to select data from the current database. Press the [?] button located next to the data field and a list will appear from which you can select from.

Filtering on PCT Zones

Place a check next to the zone you want filtered that contains a value of one or more.

Once you accept the filters by pressing <OK>, GeoTracker will update the displayed list only for those records that match your request. These filters are applied to the displaying of data or the reporting of results.

Removing Filters

You have two methods that can be used to remove all current filters. Choose from the pull down menus [Tools -> Remove Filters] or by activating the filters dialog and select <Clear All>.

Sorting the Database

Sorting the database performs a reorganizing of all records within the database. You can select to sort on the Starting Date, Serial Number or Idle Time. Sorting on idle time performs a calculation on the stop time of the previous inspection to the start time of the next inspection and sorts it according to the shortest to longest times. In cases where the two inspections being evaluated do not occur on the same calendar day, then the calculation is ignored.

Once a sort has been performed you should save the changes to the data file on your disk.

Appending Databases

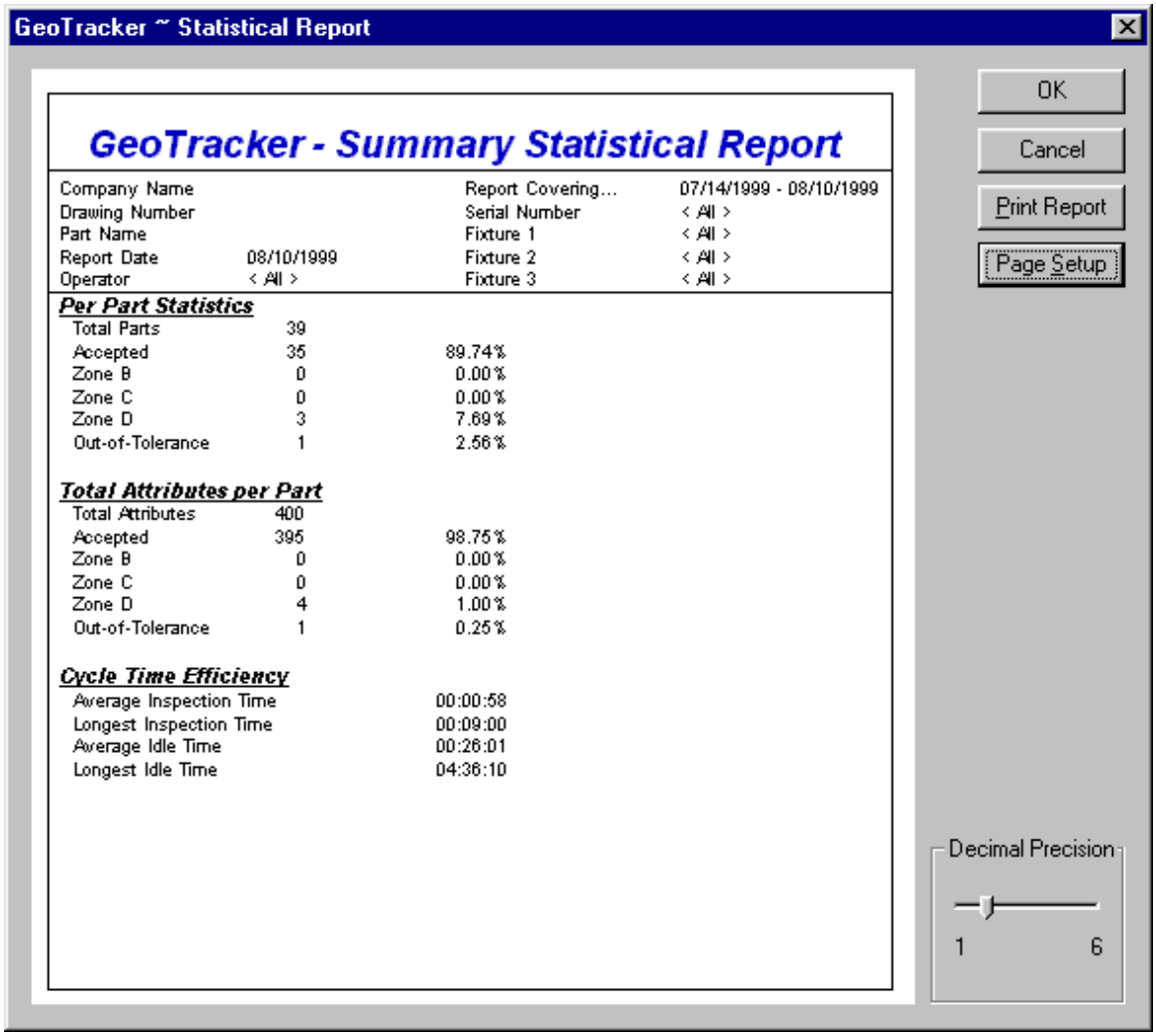
Under the File pull down menu there exists a function called [Append Database]. This function allows you to add the records from one database into the currently opened database. There is a test whether the part numbers match and if they do not a warning is provided informing that the database about to be appended does not match. You can then cancel or proceed with appending.

Report Formats

GeoTracker offers two reports that you can choose. You can access these report through the pull down menu [Reports->Statistics] and [Reports->Daily Summary] or from buttons on the main dialog <Summary Stats> and <Daily Stats>.

Summary Statistical Report

This report provides a summary of all the current filtered records. This summary includes Per Part Statistics, Total Attributes per Part and Cycle Time Efficiency.



Per Part Statistics includes the total parts inspected, total accepted with no non-conformance values, total count for each PCT zones B/C/D and Out-of-Tolerance along with percentage values for each category.

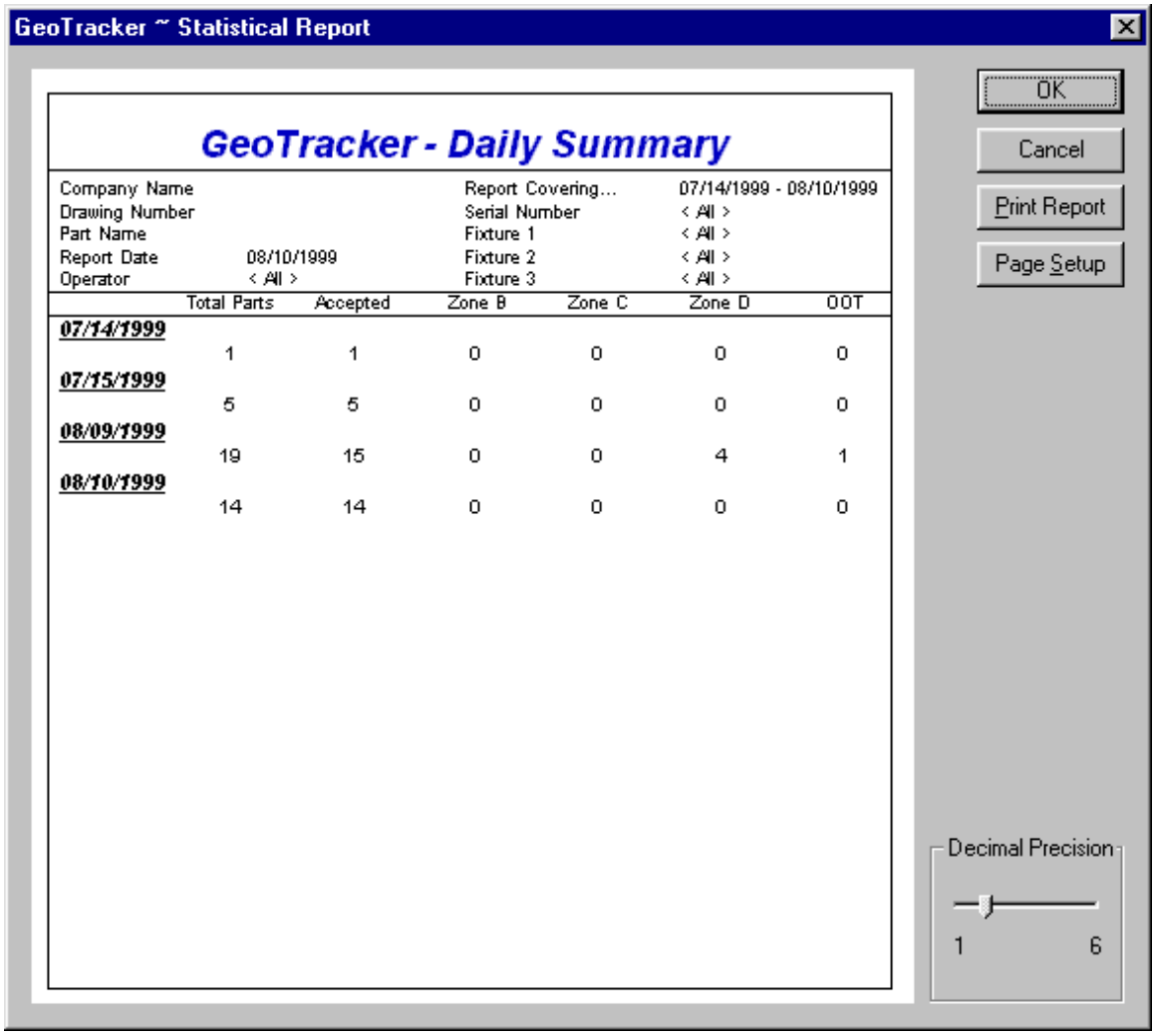
Total Attributes per Part reports the same categories as reported in Per Part Statistics except the total values are based on the number of attributes per part.

For example a part program that has two features, such as circles, would report six attributes, the size and 2D location per feature.

Cycle Time Efficiency reports the average inspection time, longest inspection time, average idle time and longest idle time. This report is helpful when evaluating CMM usage in production environments.

Daily Statistics

This report summarizes all activities on a per day basis. The data reported



includes the number of parts inspected, number of accepted parts and number of PCT categories on each part. For example a part may have two hits in zone C and one hit in zone D. It would be reported on the Daily Summary as two in zone C and one in zone D.