Diagnosing and Fixing TIMS.NT Data

As you edit your TIMS.NT data, it will develop problems that can affect your ability to modify it and report on it. Diagnose.exe is a utility that will search your data set for problems and generate reports that identify the problems it finds. The reports also tell how many instances of each problem exist and list the data records that have problems. This document tells you how to run Diagnose, how to read the reports it produces, and how to fix some of the problems your data can develop. It also tells you when to pass the problems on to your project leader.
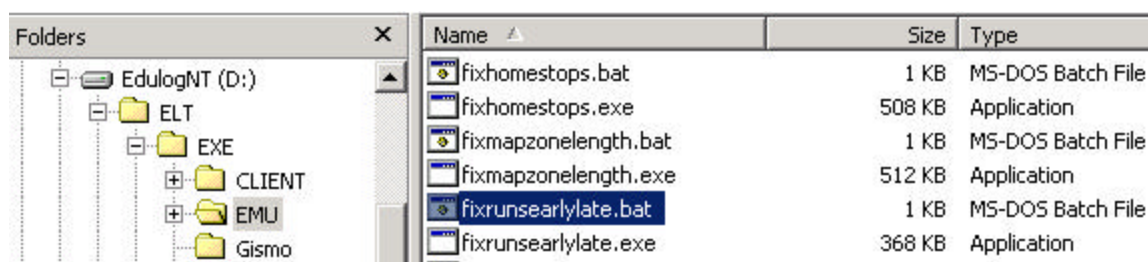
DIAGNOSE.EXE-GENERATED REPORTS

Diagnose creates a master report called diagnose.rpt. This report lists each component of your data that has problems and tells how many records in each component need repair. Each component with problems receives its own report that lists the individual records that have problems. Discussion about diagnose.rpt and other reports follows.

Diagnose places the reports in a directory whose name is based on the day diagnose is run. The directory name will be "DIAG" plus an 8-digit date value entered in the format "YYYYMMDD." For example, if you run Diagnose on May 17, 2001, the output directory will be **D:\Elt\Exe\Emu\Output**\DIAG20010517\. Any diagnostic reports generated during that same day will be output to the very same directory. If you want to save the set of reports between each run, be sure to copy them to some other location before running Diagnose again. Note also that Diagnose does not delete old folders. Your project leader should create a shortcut on your desktop to this output directory.

FIXING PROBLEMS

Diagnose does not fix problems. Once alerted to problems by the reports it generates, you need to fix the problems. In many instances, running another utility can accomplish this. In some cases, you will have to make manual edits to your data.

All diagnostic applications are located in the D:\Elt\Exe\Emu\ folder. To start a program, Explore the EMU folder and double click on the appropriate batch (.bat) file. Each batch file contains the proper path information that is required for the executable to run. For example, if the fix is to run FixRunsEarlyLate.**exe** then you double click on FixRunsEarlyLate.**bat**. Usually a DOS window will appear indicating the application has started and will disappear when finished. Always run EMU batch *01. REBUILD ALL KEYS* after fixes and before re-running *14. DIAGNOSE DATA.*

Important tips on steps to follow when fixing data: As a general rule, begin fixing data by resolving school, school transportation, and school stop/stop-service problems first. Then you can take care of students, stops, runs, and routes (usually in that order). Afterwards, run the fixes from top to bottom as they are listed in the diagnose.rpt report.

USING DIAGNOSE.EXE AND FIXES

1. Close all EdulogNT programs before running the diagnose batch or any of the 'fix' applications.
2. Run EMU batch *14. DIAGNOSE DATA*. The DOS screen disappears when utility finishes.
3. Review the **d:\Elt\Exe\Emu\Output\DIAG*YYYYMMDD*\diagnose.rpt** report for errors. You are only concerned with the reports listed in this document.
4. For each report you see, refer to the section "INTERPRETING DIAGNOSE.RPT" below. Run the prescribed utility to fix the problem.
5. If you see reports not listed in "INTERPRETING DIAGNOSE.RPT", contact your project leader for help in resolving those problems.
6. After running all fixes, rename or delete the diag report directory.
7. Run EMU batch *01. REBUILD ALL KEYS*
8. Rerun EMU batch *14. DIAGNOSE DATA*.
9. Review the new **diagnose.rpt** report (in the newly created diag directory) for errors. You may find errors listed that were not there originally.
10. If data are still not clean or you have reports that are not on this document, call your project leader.

INTERPRETING DIAGNOSE.RPT

1. STUDENT: Student Records

District.rpt: Lists all student records with District ID's that are blank or all zeros.
Fix: Pull up each student record listed in the report and enter a district id.
SchGrdPrg.rpt: Lists edulog ID of all students with invalid sch/grd/prg combo for transportation purposes.
Fix: Pull up each student record listed in the report and correct school/grade/program combination. Should be done right away if dependent stutrn, request, and/or cmndst data conditions exist because of these invalid student records.

2. STUTRN: Student Transportation Records

BTSchSrv.rpt: Lists stutrn ID for trips assigned to the wrong school service time.
Fix: Run FixTripSchBT.bat. Make sure to move BTSchSrv.rpt into the \users\username\TMP\ directory before running the utility, as this report acts as the input file for the utility.

3. STOP: Stop Records

Stop.rpt: Reports stop records with non-existent schools or clusters.
Fix: Manually delete each listed stop record.
Time.rpt: Contains the Stop ID's of stops with invalid time1 or time2 flags.
Fix: Run EMU Batch #2. Geocode Changes. If problem records remain, there still exists some problem between the geocode and the stops. From EMU click View files button. Review BADSTP.ERR and BADSTP.CHK to get an idea as to what is wrong, and then manually modify the geocode or stops accordingly.
HomeStop.rpt: Contains the Stop ID's of invalid home stops.
Fix: Run FixHomeStops.bat.

4. STPTRN: Stop Transportation Records

If any errors are reported here, call your project leader for information on how to handle fixes.

5. RUN: Run Records

NoStop.rpt: Lists any runs which have no stops on them.
                   Fix: Run FixSeq.bat and then run DeleteRunsNoStops.bat. For any garage runs that show up in this report, run ResetRtePointers.bat. If any garage or deadhead runs remain unfixed, find out which route(s) they are on and deassign appropriately; then re-assign to get valid garage and/or deadhead runs back in place.

Runtme.rpt: Contains the Run ID, School Service, time at stop, and early/late windows, for each run that has an invalid time at school.
                   Fix: Run arrival at/departure from school falls outside window. Adjust early/late times in school record or change time at school on run to fall in window.

RunZbt.rpt: Lists all the runs that have a bell time of 12:00 AM.
                   Fix: Do nothing. This is an informational listing only.

BegEnd.rpt   Lists Run ID of runs whose begin time does not match the time at stop of the first stop on the run and/or end time does not match the time at stop of the last stop on the run.
                   Fix: Run FixRunsEarlyLate.bat.

ToFrom.rpt: Outputs the Run ID of all runs with invalid To/From flags.
                   Fix: Evaluate each run to determine what the correct To/From flag should be. Manually change To/From flag as appropriate.

RunRte.rpt: Lists the Run ID of all runs with invalid Rtetrn record values.
                   Fix: Run ResetRtePointers.bat.

DupSeq.rpt: Lists the Run ID and sequence numbers of all duplicate Runtrn records.
                   Fix: Run FixRunSeq.bat.

SeqMis.rpt: Lists Run ID of all Runtrn records with missing sequence numbers.
                   Fix: Run FixRunSeq.bat.

RunsDup.rpt: Contains the Run ID's of all instances of duplicated keys.
                   Fix: Run CleanupDuplicateKeys.bat.

6. RUNTRN: Run Transportation Records

BTRuntrn.rpt: Lists each instance of runtrn records which do not have the proper destination on the run.
                   Fix: Manually fix the run(s) – this will depend on what each run looks like; it could be a wrong school service, or the right school service with the wrong bell time. Deassign the service from the run and then re-assign a valid service in its place. If the service you are trying to assign is already assigned to a different run, you must decide which run the service belongs on, and deassign/re-assign the service accordingly.

7. ROUTE: Route Records

Route.rpt: If the route does not have runs on it, the route record and route ID are listed.
                   Fix: Run DeleteRoutes.bat, or delete the specified route(s) manually. If district needs to keep these routes active, but empty, they need to realize that this will cause problems with their ability to generate reports containing any links to routes.

8. RTETRN: Route Transportation Records

If any errors are reported here, call your project leader for information on how to handle fixes.

9. REQUEST: Request Records

If any errors are reported here, call your project leader for information on how to handle fixes.

10. CMNDST: Common Destination Records

If any errors are reported here, call your project leader for information on how to handle fixes.

11. SCHOOL: School Records

SchBnd.rpt: This file lists school records with no attendance boundaries posted.

Fix: Client will handle on-site. Delete closed schools if no longer necessary.

12. SCHTRN: School Transportation Records

If any errors are reported here, call your project leader for information on how to handle fixes.

13. RUNDIR: Run Direction Records

RunDir.rpt: Lists the records containing invalid Rundir information.
                   Fix: *Run FixBadRundir.bat.
TwoGaps.rpt: Lists rundir records which, if displayed in graphical run directions, would generate output to
                   screen indicating the error for 'Two gaps next to each other.'
                   Fix: *Run FixBadRundir.bat.
BadRunID.rpt: Lists rundir records with Run ID that does not exist.
                   Fix: *Run FixBadRundir.bat (will purge the record, as it is unrecoverable).
BadFStp.rpt: Lists rundir records which contain stop service ID's that do not exist.
                   Fix: *Run FixBadRundir.bat (will attempt to locate and assign the correct service).
MsgStp.rpt: Lists rundir records that are missing one or more stop services.
                   Fix: *Run FixBadRundir.bat (will attempt to insert the missing services into the run directions).
NotOnRun.rpt: Lists rundir records that include services which are not actually on the run anymore.
                   Fix: *Run FixBadRundir.bat (will attempt to remove invalid services from the run directions).
BadPtr.rpt: Lists rundir records that have invalid extension records.
                   **Fix: *Run FixBadRundir.bat (will eliminate the bad extension records, and try to re-construct
                   valid run directions).**
MsgSegment.rpt: Lists rundir record number and run ID of runs with a missing segment ID before and after segment stops.
                   Fix: *Run FixBadRundir.bat (will insert ID of missing segment before/after problem stop).
RunDirDup.rpt: Lists duplicated rundir keys.
                   Fix: Run CleanupDuplicateKeys.bat.

*Note: If **FixBadRunDir.bat** does not completely clean up the eight associated problem areas after its first run-through, **re-run the utility again.**

14. CLUSTER: School Cluster Records

Diagnose does not currently check anything for this option.

15. CLUSTRN: School Cluster Transportation Records

If any errors are reported here, call your project leader for information on how to handle fixes.

16. GARAGE: Garage Records

GarageDup.rpt: Lists each instance of duplicated garage keys.
                  Fix: Run CleanupDuplicateKeys.bat.

17. PASSENGER: Passenger Keys

If any errors are reported here, call your project leader for information on how to handle fixes.

SAMPLE DIAGNOSTIC REPORTS

STUDENT:

District.rpt
Student Record: 177
Student Record: 223
Student Record: 345

SchGrdPrg.rpt

STUTRN:

BTSchSrv.rpt
StutrnRecord: 3362 Student: 1685 Type: 2
StutrnRecord: 3406 Student: 1707 Type: 2
StutrnRecord: 3672 Student: 1840 Type: 2

STOPS:

Stop.rpt

Time.rpt
Stop ID: 308   102
Stop ID: 314   132
Stop ID: 314   146

Homestop.rpt
Stop ID: 345   809
Stop ID: 340   808
Stop ID: 304   836

RUNS:

NoStop.rpt

RunTme.rpt
RunId: 670   018 ServiceId: 336   000001 Time at stop: 360 Early: 390 Late: 565
RunId: 670   607 ServiceId: 670   000001 Time at stop: 570 Early: 390 Late: 565
RunId: 670   609 ServiceId: 670   000002 Time at stop: 745 Early: 780 Late: 1020

Runzbt.rpt
Record Number: 394 Run ID: -006106 003
Record Number: 395 Run ID: -005105 005
Record Number: 397 Run ID: -008108 002

BegEnd.rpt
Run Id: 323   003   Record Number: 215
Run Id: 323   005   Record Number: 237
Run Id: 323   006   Record Number: 238

ToFrom.rpt
RunID: 670   901 RunRecNo: 125

RunRte.rpt

DupSeq.rpt

SeqMis.rpt

RunsDup.rpt

RUNTRN:

BTRuntrn.rpt
RunId: 316   005 Service: 337   075001 BT: 9:30 AM
RunId: 316   002 Service: 337   045001 BT: 9:30 AM
RunId: 316   002 Service: 337   042001 BT: 9:30 AM

ROUTE:

Route.rpt
Route Record: 20, Route Id: 20
Route Record: 21, Route Id: 21
Route Record: 22, Route Id: 22

SCHOOL:

SchBnd.,rpt
School Record: 1 School Code: 304
School Record: 2 School Code: 308
School Record: 32 School Code: 600

RUNDIR:

Rundir.rpt

Twogaps.rpt
Rundir Rec No: 1155 RunID: 399   400

BadrunID.rpt
Rundir Rec No: 2877 RunID: 330   008

BadFstp.rpt
Rundir Rec No: 23 RunID: 342   004
Rundir Rec No: 29 RunID: 342   005

MsgStp.rpt

NotOnRun.rpt
Rundir Rec No: 2877 RunID: 330   008

BadPtr.rpt

MsgSegment.rpt
Rundir Rec No:78 RunID: 340   801
Rundir Rec No:146 RunID: 332   803

RunDirDup.rpt

GARAGE:

Garagedup.rpt