

OpenTURBO A.02.00 Release Notes:

1. Bugs:

DBUNLOCK is not allowed in an active dynamic transaction (DBXBEGIN, . . . DBXEND or DBXUNDO), status[0] = -230

DBCLOSE is not allowed in an active dynamic transaction (DBXBEGIN, . . . DBXEND or DBXUNDO), stauts[0] = -232

TurboIMAGE is always dirty read, if you have a record just entered in the BEXBEGIN before DBXEND or DBXUNDO, all other processors can see it, but it is not true in the ORACLE which is RC only.

2002-11-18: DBBEGIN, DBEND, DBMEMO -> set status[0] = 0

2002-11-18: DBPUT and DBUPDATE -> ProcessSpecialChar() change ` to `` for X, U and Z type string.

2. Enhancement: 2PC for DBXBEGIN, DBXEND and DBXUNDO

Description: The current multiple databases transaction is not integrated into ORACLE 2PC.

Resolution: Interface to ORACLE 2PC for multiple databases transaction.

3. Enhancement: CONFIG - OT\_AUTO\_COMMIT = 100

Description: For database exclusive mode 3 and 4, the commit is still at statement level, an auto commit option should be provided for performance.

Resolution: Add OT\_AUTO\_COMMIT control into CONFIG, if user's program opens database in exclusive mode 3 and 4, the auto commit will be triggered.

Refer to item 13 for details (DBBEGIN() and DBEND()).

4. Enhancement: CONFIG -

OT_IMAGEMODE	= ON
TI_DUALMODE_HOST	= 207.92.64.66
TI_DUALMODE_SERVICE	= 32602
TI_DUALMODE_PGM	= DMDRV.BIN.IMAXSOFT

**DONE - 2002-11-17**

Description: Currently, each TurboIMAGE call is mapped to OpenTURBO, if OpenTURBO is used instead of XL.PUB.SYS; so, all TurboIMAGE are either in TurboIMAGE native mode or in OpenTURBO emulation mode. In OpenTURBO emulation mode, users can set OT\_DUALMODE = OFF for accessing ORACLE only or OT\_DUALMODE = ON for accessing both TurboIMAGE and ORACLE concurrently. But, there is no way to set to access TurboIMAGE only. OT\_IMAGEMODE = ON will change the default access mode from ORACLE to TurboIMAGE and you also need to set the TI\_DUALMODE\_HOST, TI\_DUALMODE\_SERVICE, and TI\_DUALMODE\_PGM for remote TurboIMAGE database access from HP9000. OT\_IMAGEMODE and OT\_DUALMODE share the same remote access setting, and OT\_IMAGEMODE supersedes OT\_DUALMODE.

Resolution: If you are running program from HP3000, and if the TI\_IMAGEMODE is ON, then OpenTURBO will access local TurboIMAGE only and ignore your OT\_DUALMODE setting for the specified database.

If you are running program from HP9000, and if the TI\_IMAGEMODE is ON, then OpenTURBO will access remote TurboIMAGE only and ignore your OT\_DUALMODE setting for the specified database.

5. Enhancement: Pre-processor Embedded SQL Code generator

Description:

Resolution:

6. Enhancement: OCI version of DBSVR

Description: Today, one DBSVR for one ORACLE context, if client program calls DBOPEN multiple times, OpenTURBO will spawn one for each corresponding DBOPEN. This approach is the most direct and most efficient way to handle database context, but in a large setup, it consumes too many OS resources. Multi-threaded and parallel standby is the way to go, we need to use OCI instead of dynamic query.

Resolution: Based on known rules.

7. Enhancement: TIDRV Multiple TIFiles support

Description: OpenTURBO test driver, TIDRV, can only load one TIFile at any give time, all TurboIMAGE command syntax is based on the opened TIFile, we need to support multiple TIFile and be able to TurboIMAGE command to a specific TIFile.

Resolution: Program needs to declare ti[MAX\_TI\_NUM], each TIload(TIFile) will take one ti[TICnt], use command 'ACTIVATE TIIdx' for subsequent TurboIMAGE command syntax checking.

New command USETI = TIFile\_ID (0 through 63)

**Done: 2002-11-20**

8. Enhancement: COBOLII to Micro Focus COBOL filter and translator

Description: Programmatically scan and translate any COBOLII/MF-COBOL discrepancies.

Resolution: Based on known rules.

**Done: 2002-12-09**

9. Enhancement: MPE Intrinsic Emulator ([Steven](#))

Description:

Resolution:

10. Enhancement: MPE CI Emulator

Description:

Resolution:

11. Enhancement: DBCALL

Description: Undocumented TurboIMAGE DBCALL

Resolution: Return the previous DBCALL name and status, excluding DBEXPLAIN and DBERROR calls.

**Done - 2002-12-10**

- 12.Enhancement: Prototype for Non-Middleware version of libot and libsdk

Description: libot and libsdk accessing ORACLE directly, by-pass AIM/CSF, Listener and DBSVR.

Resolution: performance improves significantly; this enhancement completely eliminates TCP/IP and network overhead, reduces in-memory copy overhead, takes advantage of ORACLE's block fetch, uses ORACLE MODEL 4 dynamic query for cursor implementation which reduces heavy round-trips ORACLE PREPARE, and uses query caching (same query only PREPARE once) and uses dynamic query with host variable (re-usable query for less PREPARE) instead of hard-coded values.

**Done - 2003-01-14**

- 13.Enhancement: DBBEGIN(turn-off auto-commit, which is default, commit work for each update and at close cursor), DBEND(commit-work)

Description: reduces commit work overhead, it is recommend only for batch updates in exclusive database access.

Resolution:

**Done - 2003-01-14**

- 14.Enhancement: otgenLOAD should perform INSERT only in trigger <detail\_tablename>\_TA1, instead of SELECT count(\*) then INSERT. This fix is for DBPUT performance enhancement. **Automatic dataset has no value in ORACLE**, unless you have TurboIMAGE apps that access Automatic dataset directly (DBGET Mode 2,3, or 7), otherwise, its existence causes tremendous overhead for DBPUT, DBDELETE and DBUPDATE.

Description: Don't migrate Automatic datasets if it is possible.

Resolution:

**Done - 2003-01-15**

- 15.Enhancement: OT\_IGNORE\_CHAINSTATUS = ON will also trigger DBPUT to skip setting STATUS 3-4 record number, it will be always 0.

Description: For performance, if you don't use DBPUT, DBFIND and DBGET returned record number, chain forward / backward record numbers, and chain count, then set OT\_IGNORE\_CHAINSTATUS = ON in you CONFIG for the specific dataset, which will improve performance significantly.

Resolution: This is new for DBPUT, if OT\_IGNORE\_CHAINSTATUS = ON, then DBPUT will by-pass ExecGETONESEQ routine and the IMAXSOFT13\_SEQ\_NO will set to 0, the INSERT BEFORE trigger will re-set it to the next available sequence number.

**Done - 2003-01-20**

- 16.Enhancement: Server Only Library - libotD.1 and libsdkD.1

Description: Due to overhead in 1) ORACLE PREPARE, 2) Single Fetch vs. BLOCK Fetch, 3) AIM/Listener, AIM/CSF and AIM/SDK Middleware, and 4) Restriction of Number of ORACLE Cursors, hence we need to re-architect our OpenTURBO for performance. Based upon our prototypes, in general, our new architecture should perform 3 to 10 times faster than current architecture, and 2-5 times faster than a native TurboIMAGE apps running on a comparable hardware.

Resolution: We would like to re-architect OpenTURBO for 2 main purpose, performance and SQL generator support.

Performance:

- o the cursor manager and SQL statement caching manager are included for both existing and new architectures.
- o the 0-roundtrips between OpenTURBO and ORACLE client is only for the new architecture
- o DBBEGIN() and DBEND() should also be implemented at high level libot.1, but it has not been proven that it has any impact to the WRITE performance
- o ignore DBPUT's return recnum does improve INSERT performance, it by-passes one extra SELECT in ExecGETONESEQ() and let INSERT trigger to set the IMAXSOFT13\_SEQ\_NO value
- o elimination of AUTO datasets does improve WRITE performance, it reduces the INSERT and UPDATE trigger's overheads significantly (no more TAL\_<set\_name> and TUI\_<set\_name> triggers)

This is new for DBPUT, if OT\_IGNORE\_CHAINSTATUS = ON, then DBPUT will by-pass ExecGETONESEQ routine and the IMAXSOFT13\_SEQ\_NO will set to 0, the INSERT BEFORE trigger will re-set it to the next available sequence number.

**Done - 2003-01-20**

**Done - 2003-02-10**

**Newer version of direct SQL libraries: libotD02.1 and libsqlD02.1, the newer version does handle multi-context, so multiple DBOPEN is allowed.**

17.Bug: ORACLE RAW column is not supported?!

Description: TurboIMAGE K is mapped to RAW, which is not yet supported.

Fixed for libot.c on LT928A and AMY, libotD02.c on AMY - **DONE 2003-02-11.**

18.Major Enhancements:

OpenTURBO must have a GUI schema view and structure changer.

OpenTURBO must be able to generate code in TurboIMAGE, Dynamic SQL and Static SQL forms via GUI front-ends.

**Refer to 99 Known Issues and A.02.01 Enhancements item 16.**

~ END A.02.00 ~