

## Notes for BBED on Windows

9i:

```
SQL> select t.*,dbms_rowid.rowid_relative_fno(rowid)||'_'||dbms_rowid.rowid_block_number(rowid)
location from emp t;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
LOCATION							
7369	SMITH	CLERK	7902	1980-12-17	800.00	20 1_50466	
7499	ALLEN	SALESMAN	7698	1981-2-20	1600.00	300.00	30 1_50466
7521	WARD	SALESMAN	7698	1981-2-22	1250.00	500.00	30 1_50466
7566	JONES	MANAGER	7839	1981-4-2	2975.00		20 1_50466
7654	MARTIN	SALESMAN	7698	1981-9-28	1250.00	1400.00	30 1_50466
7698	BLAKE	MANAGER	7839	1981-5-1	2850.00		30 1_50466
7782	CLARK	MANAGER	7839	1981-6-9	2450.00		10 1_50466
7788	SCOTT	ANALYST	7566	1987-4-19	3000.00		20 1_50466
7839	KING	PRESIDENT		1981-11-17	5000.00		10 1_50466
7844	TURNER	SALESMAN	7698	1981-9-8	1500.00	0.00	30 1_50466
7876	ADAMS	CLERK	7788	1987-5-23	1100.00		20 1_50466
7900	JAMES	CLERK	7698	1981-12-3	950.00		30 1_50466
7902	FORD	ANALYST	7566	1981-12-3	3000.00		20 1_50466
7934	MILLER	CLERK	7782	1982-1-23	1300.00		10 1_50466

14 rows selected

```
C:\Documents and Settings\francestrey>cd C:\oracle\ora92\bin
```

```
C:\oracle\ora92\bin>bbd parfile=par.txt
```

口令:

BBED: Release 2.0.0.0.0 - Limited Production on 星期三 3 月 10 21:33:40 2010

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```
BBED> setfile 1
```

```
FILE# 1
```

```
BBED> setblock 1
```

```
BLOCK# 1
```

[illegible]

```
BBED> setblock 50466
```

BLOCK#	50466
--------	-------

```

BBED> dump
File: D:\ORACLE\ORADATA\TESTDB\SYSTEM01.DBF (1)
Block: 50466          Offsets:    0 to   511          Dba:0x0040c522
-----
06020000 22c54000 3ad20200 00000106 f3b40000 01002c00 bb750000 39d20200
00000000 021f0300 00000000 0a000800 c7000000 95a88000 2e003e00 0e200000
3ad20200 00000000 00000000 00000000 00000000 00000000 00000000 00010e00
ffff2e00 691d3b1d 3b1d0000 0e007a1f 4f1f241f fb1ece1e a51e7c1e 541e2e1e
031edd1d b71d901d 691dd90e 6f0a0506 4d1f141f da1ea01e 651e261e ee1db51d
7b1d421d ec1cb31c 771c3b1c 031cc71b 8e1b541b 1a1bdf1a a01a681a 2f1af519
bc196619 2d19f118 b5187d18 47180b18 cf179317 53171317 d4169c16 5d162116
e415ac15 76153c15 0315c914 8f145614 0014c713 8b134f13 1713e112 a5126912
2d12ed11 ad116e11 3611f710 bb107e10 46101010 d60f9d0f 630f290f f00e9a0e
610e250e e90db10d 7b0d3f0d 030dc90c 8d0c510c 140cdc0b a60b6c0b 330bf90a
bf0a860a 300af709 bb097f09 47091109 d5089908 5f082308 e707aa07 72073c07
0207c906 8f065506 1c06c605 8d055105 1505dd04 a7046b04 2f04f503 b9037903
39030103 c9024e48 45580180 02c10200 08001800 0c001400 46000000 46000000
00000000 00000000 0b012c62 00000000 02010000 0f018000 06006000 0b024000

```

```
09024000 ff120301 01000000 27000000 0a001800 0c001400 12000000 76000000
76000000 00000000 00000000 0a162c61 00000000 02010278 0f018000 06005d00
```

<32 bytes per line>

BBED> map /v

File: D:\ORACLE\ORADATA\TESTDB\SYSTEM01.DBF (1)

Block: 50466

Dbf:0x0040c522

-----  
KTB Data Block (Table/Cluster)

```
struct kcbh, 20 bytes          @0
  ub1 type_kcbh                @0
  ub1 frmt_kcbh                @1
  ub1 spare1_kcbh              @2
  ub1 spare2_kcbh              @3
  ub4 rdba_kcbh                @4
  ub4 bas_kcbh                 @8
  ub2 wrp_kcbh                 @12
  ub1 seq_kcbh                 @14
  ub1 flg_kcbh                 @15
  ub2 chkval_kcbh              @16
  ub2 spare3_kcbh              @18
```

```
struct ktbbh, 72 bytes        @20
  ub1 ktbbhtyp                 @20
  union ktbbhsid, 4 bytes      @24
    struct ktbbhcsc, 8 bytes   @28
    b2 ktbbhict                @36
    ub1 ktbbhflg               @38
    ub1 ktbbhfsi               @39
    ub4 ktbbhfnx               @40
  struct ktbbhitl[2], 48 bytes @44
```

```
struct kdbh, 14 bytes         @92
  ub1 kdbhflag                 @92
  b1 kdbhntab                  @93
  b2 kdbhnrow                   @94
  sb2 kdbhfrr                  @96
  sb2 kdbhfso                   @98
  sb2 kdbhfseo                  @100
  b2 kdbhavsp                   @102
  b2 kdbhtosp                   @104
```

```

struct kdbt[1], 4 bytes      @106
    b2 kdbtoffs              @106
    b2 kdbtnrow              @108

sb2 kdbr[14]                 @110

ub1 freespace[7483]          @138

ub1 rowdata[567]             @7621

ub4 tailchk                  @8188

```

BBED> p kdbr

```

sb2 kdbr[0]                  @110      8058
sb2 kdbr[1]                  @112      8015
sb2 kdbr[2]                  @114      7972
sb2 kdbr[3]                  @116      7931
sb2 kdbr[4]                  @118      7886
sb2 kdbr[5]                  @120      7845
sb2 kdbr[6]                  @122      7804
sb2 kdbr[7]                  @124      7764
sb2 kdbr[8]                  @126      7726
sb2 kdbr[9]                  @128      7683
sb2 kdbr[10]                 @130      7645
sb2 kdbr[11]                 @132      7607
sb2 kdbr[12]                 @134      7568
sb2 kdbr[13]                 @136      7529

```

BBED> p \*kdbr[0]

rowdata[529]

-----

```

ub1 rowdata[529]             @8150      0x2c

```

BBED> x /nccn

```

rowdata[529]                 @8150

```

-----

flag@8150: 0x2c (KDRHFL, KDRHFF, KDRHFH)

lock@8151: 0x01

cols @8152: 8

col 0[3] @8153: 7369

col 1[5] @8157: SMITH

col 2[5] @8163: CLERK

```
col 3[3] @8169:7902
col 4[7] @8173:-0
col 5[2] @8181:800
col 6[0] @8184:*NULL*
col 7[2] @8185:20
```

## 10g:

```
SQL> select t.*,dbms_rowid.rowid_relative_fno(rowid)||'_'||dbms_rowid.rowid_block_number(rowid)
location from emp t;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	1980-12-17	809.00	600.00	20 4_32
7499	ALLEN	SALESMAN	7698	1981-2-20	1609.00	300.00	30 4_32
7521	WARD	SALESMAN	7698	1981-2-22	1259.00	500.00	30 4_32
7566	JONES	MANAGER	7839	1981-4-2	2984.00		20 4_32
7654	MARTIN	SALESMAN	7698	1981-9-28	1259.00	1400.00	30 4_32
7698	BLAKE	MANAGER	7839	1981-5-1	2859.00		30 4_32
7782	CLARK	MANAGER	7839	1981-6-9	2459.00		10 4_32
7788	SCOTT	ANALYST	7566	1987-4-19	3009.00		20 4_32
7839	KING	PRESIDENT		1981-11-17	5009.00		10 4_32
7844	TURNER	SALESMAN	7698	1981-9-8	1509.00	0.00	30 4_32
7876	ADAMS	CLERK	7788	1987-5-23	1109.00		20 4_32
7900	JAMES	CLERK	7698	1981-12-3	959.00		30 4_32
7902	FORD	ANALYST	7566	1981-12-3	3009.00		20 4_32
7934	MILLER	CLERK	7782	1982-1-23	1309.00		10 4_32
-7369	SMITH	CLERK	7902	1980-12-17	800.00	600.00	20 4_32

15 rows selected

C:\Documents and Settings\francestrey>cd C:\oracle10\product\10.2.0\db\_1\BIN

C:\oracle10\product\10.2.0\db\_1\BIN>bbed parfile=par.txt

口令:

BBED: Release 2.0.0.0.0 - Limited Production on 星期三 3 月 10 21:53:15 2010

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\*\*\*\*\* !!! For Oracle Internal Use only !!! \*\*\*\*\*

FILE# 4

BLOCK# 1

File: C:\ORACLE\ORADATA\CUIHUA\USERS01.DBF (4)

Block: 1 Db:0x01000001

BBED-00400:invalid blocktype (00)

```
BBED> dump
```

File: C:\ORACLE\ORADATA\CUIHUA\USERS01.DBF (4)

Block: 1                      Offsets:    0 to   511                      DbA:0x01000001

[illegible]

<32 bytes per line>

00 means OS zero block, note that it is not a datafile header block! The first byte of a datafile header block is 0b.

**Plus one when you count the block number, now you can use map /v**

```
BBED> set block 2
```

BLOCK# 2

```
BBED> map /v
```

File: C:\ORACLE\ORADATA\CUIHUA\USERS01.DBF (4)

Block: 2 Db: 0x01000002

---

## Data File Header

struct kcvfh, 360 bytes	@0
struct kcvfhbfh, 20 bytes	@0
struct kcvfhhdr, 76 bytes	@20
ub4 kcvfhrdb	@96
struct kcvfhcrs, 8 bytes	@100
ub4 kcvfhcrt	@108
ub4 kcvfhrlc	@112
struct kcvfhrls, 8 bytes	@116
ub4 kcvfhbti	@124
struct kcvfhbsc, 8 bytes	@128
ub2 kcvfhbth	@136
ub2 kcvfhsta	@138
struct kcvfhckp, 36 bytes	@140
ub4 kcvfhcpc	@176
ub4 kcvfhrts	@180
ub4 kcvfhccc	@184
struct kcvfhbcp, 36 bytes	@188
ub4 kcvfhbhz	@224
struct kcvfhxcd, 16 bytes	@228
word kcvfhstn	@244
ub2 kcvfhltl	@248
text kcvfhtnm[30]	@250
ub4 kcvfhfrn	@280
struct kcvfhrrs, 8 bytes	@284
ub4 kcvfhrrt	@292
struct kcvfhafs, 8 bytes	@296
ub4 kcvfhbbc	@304
ub4 kcvfhncb	@308
ub4 kcvfhmcb	@312
ub4 kcvfhlcb	@316
ub4 kcvfhbcs	@320
ub2 kcvfhofb	@324
ub2 kcvfhnfb	@326
ub4 kcvfhprc	@328
struct kcvfhprs, 8 bytes	@332
struct kcvfhprfs, 8 bytes	@340
ub4 kcvfhtrt	@356
 ub4 tailchk	 @8188

BBED> dump

File: C:\ORACLE\ORADATA\CUIHUA\USERS01.DBF (4)

Block: 2

Offsets: 0 to 511

Dbf:0x01000002

```
-----
0ba20000 01000001 00000000 00000104 acbe0000 00000000 0001200a 2084bf96
43554948 55410000 3e030000 40060000 00200000 04000300 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 29260000 00000000 c961d621 e4a5c127 7b290800 00000000 00000000
00000000 00000000 00000400 86000000 c6de312a 85000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 04000000 05005553 45525300 00000000 00000000
00000000 00000000 00000000 00000000 04000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
8461d621 01000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 a3c60b00 00000000 9c40842a 01000000 08000000 15a70000 10000000
```

<32 bytes per line>

BBED> p kcvfhckp

```
struct kcvfhckp, 36 bytes      @140
  struct kcvpcscn, 8 bytes      @140
    ub4 kscnbas                @140      0x00000086
    ub2 kscnwrp                @144      0xdec6
  ub4 kvcptim                  @148      0x00000085
  ub2 kvcvpthr                  @152      0x0000
  union u, 12 bytes            @156
    struct kvcprba, 12 bytes    @156
      ub4 kcrbaseq                @156      0x00000000
      ub4 kcrbabno                @160      0x00000000
      ub2 kcrbabof                @164      0x0000
    struct kvcptr, 12 bytes     @156
      struct kctrscn, 8 bytes   @156
        ub4 kscnbas            @156      0x00000000
        ub2 kscnwrp            @160      0x0000
        ub4 kctrtrtm            @164      0x00000000
      ub1 kvcpetb[0]            @168      0x00
      ub1 kvcpetb[1]            @169      0x00
      ub1 kvcpetb[2]            @170      0x00
```

ub1 kcvcpetb[3]	@171	0x00
ub1 kcvcpetb[4]	@172	0x00
ub1 kcvcpetb[5]	@173	0x00
ub1 kcvcpetb[6]	@174	0x00
ub1 kcvcpetb[7]	@175	0x00

```
BBED> set offset 484
      OFFSET            484
```

OFFSET	484
--------	-----

[illegible]

```
BBED> set block 33
```

BLOCK#	33
--------	----

BLOCK# 33

```

BBED> map /v

File: C:\ORACLE\ORADATA\CUIHUA\USERS01.DBF (4)
Block: 33                                DbA:0x01000021
-----
KTB Data Block (Table/Cluster)

struct kcbh, 20 bytes                      @0
  ub1 type_kcbh                            @0
  ub1 frmt_kcbh                            @1

```

```
File: C:\ORACLE\ORADATA\CUIHUA\USERS01.DBF (4)
Block: 33                               DbA:0x01000021
-----
KTB Data Block (Table/Cluster)

struct kcbh, 20 bytes                     @0
  ub1 type_kcbh                           @0
  ub1 frmt_kcbh                           @1
```

Block: 33 Dbid: 0x01000021

---

KTB Data Block (Table/Cluster)

struct kcbh, 20 bytes @0

    ub1 type\_kcbh @0

    ub1 frmt\_kcbh @1

KTB Data Block (Table/Cluster)	
struct kcbh, 20 bytes	@0
ub1 type_kcbh	@0
ub1 frmt_kcbh	@1

```
struct kcbh, 20 bytes      @0
  ub1 type_kcbh            @0
  ub1 frmt_kcbh            @1
```

ub1 type_kcbh	@0
ub1 frmt_kcbh	@1

ub1 frmt\_kcbh @1

ub1 spare1_kcbh	@2
ub1 spare2_kcbh	@3
ub4 rdba_kcbh	@4
ub4 bas_kcbh	@8
ub2 wrp_kcbh	@12
ub1 seq_kcbh	@14
ub1 flg_kcbh	@15
ub2 chkval_kcbh	@16
ub2 spare3_kcbh	@18
struct ktbbh, 72 bytes	@20
ub1 ktbbhtyp	@20
union ktbbhsid, 4 bytes	@24
struct ktbbhcsc, 8 bytes	@28
b2 ktbbhict	@36
ub1 ktbbhflg	@38
ub1 ktbbhfsi	@39
ub4 ktbbhfnx	@40
struct ktbbhitl[2], 48 bytes	@44
struct kdbh, 14 bytes	@100
ub1 kdbhflag	@100
b1 kdbhntab	@101
b2 kdbhnrow	@102
sb2 kdbhfre	@104
sb2 kdbhfsbo	@106
sb2 kdbhfseo	@108
b2 kdbhavsp	@110
b2 kdbhtosp	@112
struct kdbt[1], 4 bytes	@114
b2 kdbtoffs	@114
b2 kdbtnrow	@116
sb2 kdbr[15]	@118
ub1 freespace[7064]	@148
ub1 rowdata[976]	@7212
ub4 tailchk	@8188

BBED> p \*kdbr[0]

rowdata[287]

-----

ub1 rowdata[287]

@7499

0x2c

BBED> x /rncn

rowdata[287]

@7499

-----

flag@7499:0x2c (KDRHFL,KDRHFF,KDRHFH)

lock@7500:0x01

cols@7501: 8

col 0[3] @7502:7369

col 1[5] @7506:SMITH

col 2[5] @7512:CLERK

col 3[3] @7518:7902

col 4[7] @7522:-0

col 5[3] @7530:809

col 6[2] @7534:600

col 7[2] @7537:20

SQL> select dump(7369,16) from dual;

DUMP(7369,16)

-----

Typ=2 Len=3: **c2,4a,46**

SQL> select dump(7370,16) from dual;

DUMP(7370,16)

-----

Typ=2 Len=3: **c2,4a,47**

BBED> set offset 7502

OFFSET

7502

BBED> dump

File: C:\ORACLE\ORADATA\CUIHUA\USERS01.DBF (4)

Block: 33

Offsets: 7502 to 8013

Dbf:0x01000021

-----

**03c24a46** 05534d49 54480543 4c45524b 03c25003 0777b40c 11010101 03c2090a

02c20702 c1152c00 08043d1c 20660553 4d495448 05434c45 524b03c2 50030777

b40c1101 010102c2 0902c207 02c1152c 000803c2 4a460553 4d495448 05434c45

524b03c2 50030777 b40c1101 010102c2 0902c207 02c1152c 000803c2 5023064d

```
494c4c45 5205434c 45524b03 c24e5307 77b60117 01010102 c20eff02 c10b2c00
0803c250 0304464f 52440741 4e414c59 535403c2 4c430777 b50c0301 010102c2
1fff02c1 152c0108 02c25005 4a414d45 5305434c 45524b03 c24d6307 77b50c03
01010103 c20a3cff 02c11f2c 000803c2 4f4d0541 44414d53 05434c45 524b03c2
4e590777 bb051701 010102c2 0cff02c1 152c0008 03c24f2d 06545552 4e455208
53414c45 534d414e 03c24d63 0777b509 08010101 02c21001 8002c11f 2c000803
c24f2804 4b494e47 09505245 53494445 4e54ff07 77b50b11 01010102 c233ff02
c10b2c00 0803c24e 59055343 4f545407 414e414c 59535403 c24c4307 77bb0413
01010102 c21fff02 c1152c01 0803c24e 5305434c 41524b07 4d414e41 47455203
c24f2807 77b50609 01010103 c2193cff 02c10b2c 010803c2 4d630542 4c414b45
074d414e 41474552 03c24f28 0777b505 01010101 03c21d3c ff02c11f 2c010803
c24d3706 4d415254 494e0853 414c4553 4d414e03 c24d6307 77b5091c 01010103
```

<32 bytes per line>

BBED> modify /x 03c24a47

File: C:\ORACLE\ORADATA\CUIHUA\USERS01.DBF (4)

Block: 33

Offsets: 7502 to 8013

Dbf:0x01000021

```
-----
03c24a47 05534d49 54480543 4c45524b 03c25003 0777b40c 11010101 03c2090a
02c20702 c1152c00 08043d1c 20660553 4d495448 05434c45 524b03c2 50030777
b40c1101 010102c2 0902c207 02c1152c 000803c2 4a460553 4d495448 05434c45
524b03c2 50030777 b40c1101 010102c2 0902c207 02c1152c 000803c2 5023064d
494c4c45 5205434c 45524b03 c24e5307 77b60117 01010102 c20eff02 c10b2c00
0803c250 0304464f 52440741 4e414c59 535403c2 4c430777 b50c0301 010102c2
1fff02c1 152c0108 02c25005 4a414d45 5305434c 45524b03 c24d6307 77b50c03
01010103 c20a3cff 02c11f2c 000803c2 4f4d0541 44414d53 05434c45 524b03c2
4e590777 bb051701 010102c2 0cff02c1 152c0008 03c24f2d 06545552 4e455208
53414c45 534d414e 03c24d63 0777b509 08010101 02c21001 8002c11f 2c000803
c24f2804 4b494e47 09505245 53494445 4e54ff07 77b50b11 01010102 c233ff02
c10b2c00 0803c24e 59055343 4f545407 414e414c 59535403 c24c4307 77bb0413
01010102 c21fff02 c1152c01 0803c24e 5305434c 41524b07 4d414e41 47455203
c24f2807 77b50609 01010103 c2193cff 02c10b2c 010803c2 4d630542 4c414b45
074d414e 41474552 03c24f28 0777b505 01010101 03c21d3c ff02c11f 2c010803
c24d3706 4d415254 494e0853 414c4553 4d414e03 c24d6307 77b5091c 01010103
```

<32 bytes per line>

BBED> sum apply

Check value for File 4, Block 33:

current = 0x1f69, required = 0x1f69

SQL> conn scott/tiger@cuihua;

Connected to Oracle Database 10g Enterprise Edition Release 10.2.0.1.0

Connected as scott

```
SQL> select t.*,dbms_rowid.rowid_relative_fno(rowid)||'_'||dbms_rowid.rowid_block_number(rowid)
location from emp t;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
-----	-----	-----	----	-----	-----	-----	-----
7370	SMITH	CLERK	7902	1980-12-17	809.00	600.00	20 4_32
7499	ALLEN	SALESMAN	7698	1981-2-20	1609.00	300.00	30 4_32
7521	WARD	SALESMAN	7698	1981-2-22	1259.00	500.00	30 4_32
7566	JONES	MANAGER	7839	1981-4-2	2984.00		20 4_32
7654	MARTIN	SALESMAN	7698	1981-9-28	1259.00	1400.00	30 4_32
7698	BLAKE	MANAGER	7839	1981-5-1	2859.00		30 4_32
7782	CLARK	MANAGER	7839	1981-6-9	2459.00		10 4_32
7788	SCOTT	ANALYST	7566	1987-4-19	3009.00		20 4_32
7839	KING	PRESIDENT		1981-11-17	5009.00		10 4_32
7844	TURNER	SALESMAN	7698	1981-9-8	1509.00	0.00	30 4_32
7876	ADAMS	CLERK	7788	1987-5-23	1109.00		20 4_32
7900	JAMES	CLERK	7698	1981-12-3	959.00		30 4_32
7902	FORD	ANALYST	7566	1981-12-3	3009.00		20 4_32
7934	MILLER	CLERK	7782	1982-1-23	1309.00		10 4_32
7369	SMITH	CLERK	7902	1980-12-17	800.00	600.00	20 4_32

15 rows selected