

```
-- Create another table to which we will join to the radiohead table
SQL> create table ok_computer (id number, code varchar2(5), description varchar2(20));
Table created.
```

```
SQL> begin
  2 insert into ok_computer values(1, 'AAA', 'Description A');
  3 insert into ok_computer values(2, 'BBB', 'Description B');
  4 insert into ok_computer values(3, 'CCC', 'Description C');
  5 insert into ok_computer values(4, 'DDD', 'Description D');
  6 insert into ok_computer values(5, 'EEE', 'Description E');
  7 insert into ok_computer values(6, 'FFF', 'Description F');
  8 insert into ok_computer values(7, 'GGG', 'Description G');
  9 insert into ok_computer values(8, 'HHH', 'Description H');
 10 insert into ok_computer values(9, 'III', 'Description I');
 11 insert into ok_computer values(10, 'JJJ', 'Description J');
 12 commit;
 13 end;
 14 /
```

PL/SQL procedure successfully completed.

```
SQL> alter table ok_computer add primary key(id, code);
```

Table altered.

```
SQL> exec dbms_stats.gather_table_stats(ownname=>null, tabname=>'OK_COMPUTER',
estimate_percent=>null, cascade=>true, method_opt=>'FOR ALL COLUMNS SIZE 1');
```

PL/SQL procedure successfully completed.

```
-- Let's recreate the concatenated index on the radiohead table
```

```
SQL> create index radiohead_idx on radiohead(id, code);
```

Index created.

```
SQL> select * from radiohead r, ok_computer o where r.id = 5 and r.code = 'EEE';
```

100000 rows selected.

Execution Plan

Plan hash value: 3583729066

Id	Operation	Name	Rows	Bytes	Cost (%CPU)	Time
0	SELECT STATEMENT		100K	4101K	989 (2)	00:00:12
1	MERGE JOIN CARTESIAN		100K	4101K	989 (2)	00:00:12
2	TABLE ACCESS FULL	OK_COMPUTER	10	210	2 (0)	00:00:01
3	BUFFER SORT		10000	205K	987 (2)	00:00:12
* 4	TABLE ACCESS FULL	RADIOHEAD	10000	205K	99 (2)	00:00:02

Predicate Information (identified by operation id):

4 - filter("R"."ID"=5 AND "R"."CODE"='EEE')

Statistics

```

1 recursive calls
0 db block gets
376 consistent gets
0 physical reads
0 redo size
1203277 bytes sent via SQL*Net to client
605 bytes received via SQL*Net from client
21 SQL*Net roundtrips to/from client
1 sorts (memory)
0 sorts (disk)
100000 rows processed
```

```
SQL> drop index radiohead_idx;
```

Index dropped.

```
SQL> select * from radiohead r, ok_computer o where r.id = 5 and r.code = 'EEE';
```

100000 rows selected.

#### Execution Plan

Plan hash value: 3348432975

Id	Operation	Name	Rows	Bytes	Cost (%CPU)	Time
0	SELECT STATEMENT		10000	410K	373 (1)	00:00:05
1	MERGE JOIN CARTESIAN		10000	410K	373 (1)	00:00:05
* 2	TABLE ACCESS FULL	RADIOHEAD	1000	21000	100 (1)	00:00:02
3	BUFFER SORT		10	210	272 (0)	00:00:04
4	TABLE ACCESS FULL	OK_COMPUTER	10	210	0 (0)	00:00:01

Predicate Information (identified by operation id):

2 - filter("R"."ID"=5 AND "R"."CODE"='EEE')

#### Statistics

165 recursive calls  
0 db block gets  
404 consistent gets  
0 physical reads  
0 redo size  
2603137 bytes sent via SQL\*Net to client  
605 bytes received via SQL\*Net from client  
21 SQL\*Net roundtrips to/from client  
6 sorts (memory)  
0 sorts (disk)  
100000 rows processed

--NOTE: Oracle is now joining the tables in a different, less optimal order as it now has an incorrect cardinality estimate for the radiohead table ...