

First, create a simple table and associated index.

```
SQL> CREATE TABLE invisible_bowie
      AS SELECT rownum id, sysdate-10000+mod(rownum,10000) date_field
      FROM dual CONNECT BY LEVEL <=1000000;
```

Table created.

```
SQL> CREATE INDEX invisible_bowie_i ON invisible_bowie(date_field);
```

Index created.

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

PL/SQL procedure successfully completed.

By default, indexes are created as "VISIBLE" in line with previous behaviour.

```
SQL> SELECT index_name, visibility FROM user_indexes WHERE index_name = 'INVISIBLE_BOWIE_I';
```

INDEX_NAME	VISIBILITY
INVISIBLE_BOWIE_I	VISIBLE

As the index is visible, it can be considered and used by the CBO ...

```
SQL> SELECT * FROM invisible_bowie WHERE date_field > sysdate - 1;
```

100 rows selected.

Execution Plan

Plan hash value: 2773462488

Id	Operation	Name	Rows	Bytes	Cost (%CPU)	Time
0	SELECT STATEMENT		100	1200	103 (0)	00:00:02
1	TABLE ACCESS BY INDEX ROWID	INVISIBLE_BOWIE	100	1200	103 (0)	00:00:02
* 2	INDEX RANGE SCAN	INVISIBLE_BOWIE_I	100		3 (0)	00:00:01

However, 11g allows us to make indexes invisible ...

```
SQL> ALTER INDEX invisible_bowie_i INVISIBLE;
```

Index altered.

```
SQL> SELECT index_name, visibility FROM user_indexes WHERE index_name = 'INVISIBLE_BOWIE_I';
```

INDEX_NAME	VISIBILITY
INVISIBLE_BOWIE_I	INVISIBLE

Now the CBO can't "see" the index as it's invisible ...

```
SQL> SELECT * FROM invisible_bowie WHERE date_field > sysdate - 1;
```

100 rows selected.

Execution Plan

Plan hash value: 3921283736

Id	Operation	Name	Rows	Bytes	Cost (%CPU)	Time
0	SELECT STATEMENT		100	1200	719 (5)	00:00:09
* 1	TABLE ACCESS FULL	INVISIBLE_BOWIE	100	1200	719 (5)	00:00:09

Oracle chooses a Full Table Scan as there's no available, visible index ...

However, any specific sessions can be altered so they can "see" these invisible indexes.

```
SQL> ALTER SESSION SET OPTIMIZER_USE_INVISIBLE_INDEXES = true;
```

Session altered.

```
SQL> SELECT * FROM invisible_bowie WHERE date_field > sysdate - 1;
```

100 rows selected.

Execution Plan

Plan hash value: 2773462488

Id	Operation	Name	Rows	Bytes	Cost (%CPU)	Time
0	SELECT STATEMENT		100	1200	103 (0)	00:00:02
1	TABLE ACCESS BY INDEX ROWID	INVISIBLE_BOWIE	100	1200	103 (0)	00:00:02
* 2	INDEX RANGE SCAN	INVISIBLE_BOWIE_I	100		3 (0)	00:00:01

Indexes can also be altered and made visible to everyone ...

```
SQL> ALTER INDEX invisible_bowie_i VISIBLE;
```

Index altered.

```
SQL> ALTER SESSION SET OPTIMIZER_USE_INVISIBLE_INDEXES = false;
```

Session altered.

```
SQL> SELECT * FROM invisible_bowie WHERE date_field > sysdate - 1;
```

100 rows selected.

Execution Plan

Plan hash value: 2773462488

Id	Operation	Name	Rows	Bytes	Cost (%CPU)	Time
0	SELECT STATEMENT		100	1200	103 (0)	00:00:02
1	TABLE ACCESS BY INDEX ROWID	INVISIBLE_BOWIE	100	1200	103 (0)	00:00:02
* 2	INDEX RANGE SCAN	INVISIBLE_BOWIE_I	100		3 (0)	00:00:01