Appendix B   Oracle ECMSDK session-based trigger

On each ECMSDK user session creation and termination, the following session-based trigger is used to call decryption and encryption procedures, respectively. Those two procedures first obtain the *single-user* as well as the *multi-user* GIS files to which a user has privilege, and then calls either the decryption or the encryption procedure.

To prevent the execution of this trigger when multiple users are using the same account (which would corrupt the file resulting from double encryption and decryption), the trigger first queries the number of existing sessions of the user; only if no existing session of the user exists, then the files are decrypted or encrypted.

```
1.  CREATE OR REPLACE TRIGGER dec_enc_spatial_files
2.    BEFORE INSERT OR DELETE ON ifssys.odmz_session
3.    FOR EACH ROW
4.    DECLARE
5.      v_sessions NUMBER;
6.      CURSOR active_CMSDK_user_sessions IS
7.        SELECT USERID FROM IFSSYS.ODMZ_SESSION
8.     WHERE USERID = (:NEW.USERID) OR USERID = (:OLD.USERID);
9.    BEGIN
10.   OPEN active_CMSDK_user_sessions;
11.   FETCH active_CMSDK_user_sessions INTO v_sessions;
12.   -- Only if no existing sessions of this user, then decrypt or encrypt
13.   IF active_CMSDK_user_sessions%NOTFOUND THEN
14.     IF INSERTING THEN
15.        CMSDK_spatial_crypt.get_11gcmsdk_user_files_dec (:NEW.USERID);
16.     ELSIF DELETING THEN
17.        CMSDK_spatial_crypt.get_11gcmsdk_user_files_enc (:OLD.USERID);
18.     END IF;
19.   END IF;
20.   CLOSE active_CMSDK_user_sessions;
21. END dec_enc_spatial_files;
22. /
```