Project: TIS	Incident Number/Reference: 036
DESCRIPTION *(data and sequence of actions leading to fault, details of actual and expected response)*	
In the Formal Specification S.P1229.41.2 and Formal Design S.P1229.50.1 the screen message presented while a user entry operation (long lived) is in progress does not indicate that the administrator cannot perform an action. In particular a logged on administrator is still prompted for an operation request, which will be ignored until the user entry is complete. Found in test: UserEntry6 *Supporting documentation attached* ~~YES~~/NO *Continued* ~~YES~~/NO	
Found during: *(use actual project stages)*	~~Reqs /Sys spec/Security Spec/Proof of Spec/Formal Design/INFORMED Design/ Proof of Design/Code/Code Proof/Integration/~~Sys test~~/Acceptance~~
Date: 13/8/2003	Signature of Originator:
EVALUATION *(include list of items affected, details of work required, other similar faults, tests to be re-run)*	
The screen message should be changed to use the, currently unused, *busy* message while the system status is anything other than quiescent or waitingRemoveTokenFail. **See continuation.** *Continued* YES/~~NO~~	
Classification:	~~Critical /~~ Major~~/ Minor / Interfaces / Test / No Fault~~
Introduced during: *(use actual project stages)*	~~Reqs/~~Sys spec~~/Security Spec/Formal Design/INFORMED Design/ Code/Integration/Sys test/Acceptance~~
Date: 13/8/2003	Signature of Evaluator:
RESPONSE *(detail how incident is to be resolved, identify cause of problem, related faults and change requests)*	
Update as described in the evaluation *Continued* ~~YES~~/NO	
Date: 13/8/2003	Signature of Project Manager:
IMPLEMENTATION *(if applicable)*	
Assigned to:	Signature of Project Manager:

Item modified	Date/Version	Signature of Checker	Signature of Integrator
S.P1229.41.2 (Spec)	1·3	David Cooper	
S.P1229.50.1 (Design)	1·2	David Cooper	
S.P1229.50.2 (INFORMED)	1·1	David Cooper	
			Continued YES

Evaluation Continued:

In the **Formal Spec** the UserEntryContext should be changed so that the screen message is set to busy if the current status represents an active user entry state.

To do this we should introduce a new schema *ResetScreenMessage* that defines the appropriate screen message based on the new status and enclave status. Notice that as user entry activities cannot occur concurrently with admin activities we only need concern ourselves with the values when the enclave is quiescent or waitingRemoveAdminTokenFail.

represented equivalently in design

```
--ResetScreenMessage ----------------------------
 \Delta Internal
 \Delta Admin
 currentScreen, currentScreen' : Screen
-------------------------------------------------
status' \notin { quiescent, waitingRemoveTokenFail } and currentScreen'.screenMsg = busy
 or
status' \in {quiescent, waitingRemoveTokenFail } and
 (enclaveStatus' = enclaveQuiescent and rolePresent' = nil and currentScreen'.screenMsg = welcomeAdmin
  or enclaveStatus' = enclaveQuiescent and rolePresent' /= nil and currentScreen'.screenMsg = requestOp
  or enclaveStatus' = waitingRemoveAdminTokenFail and currentScreen'.screenMsg = removeToken
  or enclaveStatus' \notin { enclaveQuiescent, waitingRemoveAdminTokenFail }
      and currentScreen'.screenMsg = currentScreen.screenMsg)
-------------------------------------------------
```

In addition those Admin activities that can occur during the UserEntry (*AdminTokenTimeout* and *AdminTokenTear* as part of TokenRemovedAdminLogout) should set the currentScreen'.screenMsg depending on the current status of the UserEntry. This can be achieved by using the above *ResetScreenMessage* schema to update the screen message.

In the **Formal Design** the same changes should be made as for the Specification.

In the **INFORMED Design** a new public operation **ResetScreenMessage** is required in the enclave package – this will set the screen message based on the EnclaveStatus. Also the operation **InProgress** should be added to the public interface of the UserEntry package.

In the **code**

✓ **enclave.ads/enclave.adb** add new operation ResetScreenMessage and remove the setting of the screen message from the operations that currently implement AdminTokenTimeout and AdminTokenRemovedAdminLogout.

✓ **userentry.ads/adb** make the currently private function **UserEntryInProgress** visible and rename it **InProgress**.

✓ **tis.adb** in the operation Processing set the screen after calls to UserEntry.StartEntry, UserEntry.Progress and Enclave.AdminLogout this will take the form

```
if UserEntry.UserEntryInProgress then Screen.SetMessage(Screen.Busy);
else Enclave.ResetScreenMessage end if;
```

IMPLEMENTATION Continued:

Item modified	Date/Version	Signature of Checker	Signature of Integrator
tis.adb	1.15 → 1.16	David Cooper	
enclave.ads	1.11 → 1.12	David Cooper	
enclave.adb	1.12 → 1.13	David Cooper	
userentry.ads	1.10 → 1.11	David Cooper	
userentry.adb	1.12 → 1.13	David Cooper	