

3.4.5 COTS Software Upgrade Scenario

3.4.5.1 Scenario Description

This scenario describes actions that will be taken to implement an upgrade of an ECS COTS application. The scenario begins with the ECS Property Administrator receiving an upgrade to a COTS software application being used by the DAACs, SMC, and EOC. The Property Administrator records the receipt of the copies of the upgrade in the property records and prepares a CCR announcing the receipt of the upgrade to initiate review action.

3.4.5.2 Frequency

This scenario will run whenever a COTS upgrade has been received.

3.4.5.3 Assumptions

1. All COTS software upgrades will be shipped to the ECS Property Administrator, rather than to the sites, to ensure vendor compliance with their contracts. ECS Property Administrator will distribute copies of the software upgrade to the appropriate sites property administrators after the upgrade has been approved by the ESDIS CCB for implementation.
2. Installation of a COTS software upgrade constitutes a baseline change and will result in a baseline identifier change.
3. Key players (Property Administrator (PA), site sustaining engineer (SE), SMC and site CM administrators, sustaining engineering organization (SEO) staff member (SM)) will have access to the Change Request Manager application, the Distributed Defect Tracking System (DDTS).
4. DDTS will be set up to provide E-mail notification to the CCR submitter and other personnel whenever the CCR is modified.
5. SEO SM, SE, SMC and site CM Administrators will have access to the Baseline Manager application, XRP II.
6. Responsibilities of key players (Ref: Property Management Plan (DID 602), Maintenance and Operations Configuration Management Plan for the ECS Project (Preliminary, DID 102)):
 - ECS Property Administrator (PA)—receives, records receipt, accounts for, distributes ECS COTS applications upgrades to sites PAs.
 - SEO—assesses feasibility, cost, schedule, and performance impacts of proposed system-wide changes; and presents assessment to the ESDIS CCB.
 - SMC CM Administrator—facilitates the configuration change request process. Monitors and reports status of proposed and approved CM actions.
 - Site Sustaining Engineer—assesses impact of proposed system-wide changes on the DAAC. Manages implementation of changes as directed by local CCB and/or SEO.

- Site CCB—reviews and approves requested site's impact assessment and the forwarding of the assessment to the SEO.
- Site CM Administrator—facilitates the site's configuration change request process. Updates site baseline records when required.

3.4.5.4 Components

Figure 3.4.5.4-1 indicates the interaction between the DAAC personnel and the ECS subsystems.

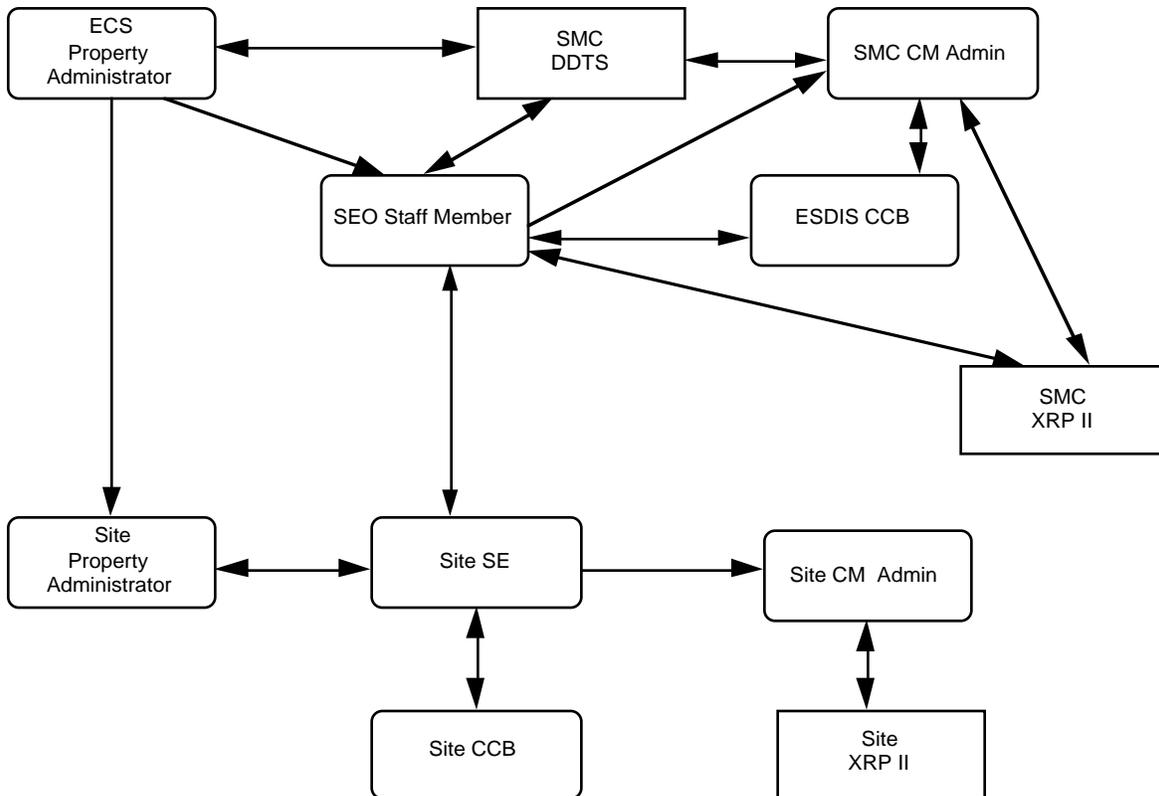


Figure 3.4.5.4-1. COTS Software Upgrade Components

3.4.5.5 Preconditions

1. DDTs is installed on each site's (SMC, DAACs, EOC) network.
2. XRP II is installed at each site.
3. E-mail facility links all sites.

3.4.5.6 Detailed steps of process

Table 3.4.5.6-1 represents the details of this scenario. The times and duration given are approximate.

Table 3.4.5.6-1. COTS Software Upgrade Process (1 of 6)

Step	Time (mins)	User	Operator (User Services Desk, Sustaining Engineer, CM Administrator, SEO staff member)	ECS System	Figure
1	<5		<p>ECS PA receives an upgrade to a COTS software application, records the receipt of the upgrade in the property records and then executes DDTS to compose a CCR to announce receipt of the upgrade.</p> <p>ECS PA clicks the "Submit" button to bring up the CCR input screen.</p> <p>ECS PA enters the class and project name for the CCR.</p> <p>ECS PA enters the name of the software, version number, descriptive title for the CCR, recommended priority, proposed change on the form and then clicks the "Commit" button.</p>	<p>DDTS displays its main menu page.</p> <p>DDTS displays an initial input screen.</p> <p>DDTS accepts the input and displays the CCR form.</p> <p>DDTS stores the CCR information in its database, assigns a CCR identifier number, sets an initial state (new), and sends e-mail notification of its existence to the SMC CM Administrator.</p>	<p>3.4.5.6-1</p> <p>3.4.5.6-2</p> <p>3.4.5.6-3a 3.4.5.6-3b</p>
2	5		<p>SMC CM Admin. receives e-mail notification, accesses DDTS, reviews the CCR.</p> <p>SMC CM Admin. gets a copy of the COTS software upgrade from the ECS PA and sends it to the SEO for assessment purposes.</p> <p>SMC CM Admin. again accesses DDTS, selects the appropriate CCR and the "Change_State" option to changes its state to "assigned" (assigned to SEO for action). SMC CM Admin. clicks the "Commit" button to process the change.</p>	<p>DDTS displays its main menu page and the CCR.</p> <p>DDTS changes state for this CCR to "assigned." DDTS sends e-mail notification of the CCR to the SEO and also notifies (via e-mail) the CCR originator of the update.</p>	<p>3.4.5.6-4</p>

Step	Time (mins)	User	Operator (User Services Desk, Sustaining Engineer, CM Administrator, SEO staff member)	ECS System	Figure
3	5		SEO staff member (SM) receives e-mail notification, accesses DDTs, selects the appropriate CCR and the "Change_State" option to changes its state to "open" (SEO begins work on the CCR).	DDTS displays CCR. DDTS changes state to "open."	3.4.5.6-4
4	<20		SEO receives a copy of the COTS upgrade from the SMC CM Admin., SEO executes XRP II to determine where the COTS application is being used.	XRP II searches its database and displays the site locations where the software is being used.	
5	<5		SEO SM tests the upgrade, and drafts a recommendation. SEO SM accesses DDTs to enters the results of the testing and the draft recommendation into the CCR. SEO SM selects the appropriate CCR in the index and then clicks the "Modify" button and selects the "Add Enclosure" option. SEO SM enters his test results and draft recommendation, executes the editor's File Menu's save option and enters an enclosure title such as "COTS Upgrade Assessment."	DDTS displays CCR. DDTS initiates its text editor. DDTS saves the information under the entered enclosure title.	3.4.5.6-4
6	<10		SEO SM uses the print option of DDTs to print a copy of the CCR to a file. SEO SM uses e-mail facility to mail a copy of the CCR to the SE of each site (identified by XRP II) for impact assessment.	DDTS prints a copy of the CCR to a designated file. E-mail facility mails request for assessment with attached CCR file to each site.	3.4.5.6-5

Step	Time (mins)	User	Operator (User Services Desk, Sustaining Engineer, CM Administrator, SEO staff member)	ECS System	Figure
7			Site SE receives and assesses CCR, forwards assessment (contains information such as the purpose of the assessment, name of requesting agency, impact to site resources, benefits to site, recommendation, and a copy of the CCR) to site CM Admin. Site CM Admin. provides assessment to site CCB for review and approval. After the site CCB reviews and approves the assessment, site SE e-mails site assessment to the SEO.		
8			SEO SM receives sites assessments via e-mail. reviews assessments, develops a summary of the assessments and finalizes the recommendation.		
9	<25		<p>SEO SM accesses DDTS, selects the appropriate CCR in the index and then clicks the "COTS Upgrade Assessment" enclosure icon.</p> <p>SEO SM clicks the "Edit Enclosure" button and then enters a summary of the impact assessments and the final recommendation, executes the editor's File Menu's save option and enters an enclosure title.</p> <p>SEO SM uses the "Add Enclosure" feature to insert each site's assessment file into an enclosure and names each site's assessment enclosure appropriately.</p> <p>SEO informs SMC CM Admin. that CCR is ready for ESDIS CCB review.</p>	<p>DDTS displays the CCR and the enclosures are shown at the bottom of the screen. DDTS displays the selected enclosure.</p> <p>DDTS saves the information under the selected enclosure title.</p> <p>DDTS saves the content of each file under the entered enclosure title.</p>	3.4.5.6-4

Step	Time (mins)	User	Operator (User Services Desk, Sustaining Engineer, CM Administrator, SEO staff member)	ECS System	Figure
10	<2		<p>To get a hard copy of the CCR for the ESDIS CCB's review, SMC CM Admin. clicks "Print" button</p> <p>SMC CM Admin. sends a hard copy of CCR to the ESDIS CCB members for review and approval.</p>	<p>DDTS prints the CCR's information.</p> <p>DDTS sends e-mail notification of the update to the CCR originator.</p>	3.4.5.6-5
11			<p>ESDIS CCB reviews and approves CCR and issues implementation instructions (such as when to distribute the upgrade, recommended time for installation (final installation schedule will be coordinated with the sites through the SMC), and new baseline ID).</p>		
12	<10		<p>SMC CM Admin. accesses DDTS to record ESDIS CCB's approval of the CCR.</p> <p>SMC CM Admin. selects appropriate CCR and then clicks "Modify" menu.</p> <p>SMC CM Admin. selects 'Modify Record' option.</p> <p>SMC CM Admin. enters disposition (approved), implementing instructions, and priority. Then clicks the "Commit" button.</p>	<p>DDTS displays its main menu page.</p> <p>DDTS displays the "Modify" menu.</p> <p>DDTS stores the information in its database and notifies (via e-mail) the SEO SM and the CCR originator of the update.</p>	3.4.5.6-4

Step	Time (mins)	User	Operator (User Services Desk, Sustaining Engineer, CM Administrator, SEO staff member)	ECS System	Figure
13	<5		<p>SMC CM Admin. executes XRP II to create a resource profile for the COTS software upgrade; selects product information menu to enter the name and version of the software, associated CCR's number, and other descriptive information about the upgrade; also enters new baseline information and its effective date.</p> <p>SMC Admin. enters a command to generate a resource profile record that will be used to update the sites baseline databases.</p> <p>SMC Admin. e-mails update message with resource profile record attached to each of the sites' CM Admin.</p>	<p>XRP II creates new resource and baseline profile records and stores them in the SMC's baseline management database.</p> <p>XRP II creates a export record.</p> <p>E-mail facility transmit message to sites.</p>	
14			<p>ECS PA sends copies of the software upgrade to the SMC operations staff and the sites PAs. Site PA provides the upgrade to the site SE for installation. After coordinating with the SMC and appropriate site officials and gaining site approvals, site SE manages installation of the COTS software upgrade. SE reports installation to the site CM administrator and the SEO.</p>		
15	<5		<p>Site CM Admin. executes XRP II to add a resource profile record for the COTS software upgrade to XRP II's database; also enters new baseline information and its effective date.</p>	<p>XRP II accesses export file and imports resource profile record into the site's baseline management database and adds a baseline profile record to the site's baseline management database.</p>	

Step	Time (mins)	User	Operator (User Services Desk, Sustaining Engineer, CM Administrator, SEO staff member)	ECS System	Figure
16			<p>SEO SM informs the SMC CM Admin. that all sites have installed the COTS upgrade. SMC CM Admin. executes DDTS to close the CCR. SMC CM Admin. selects the appropriate CCR, changes the state to indicate completion, and clicks the "Commit" button.</p> <p>SMC CM Admin. posts status of the CCR on the ECS bulletin board.</p>	<p>DDTS displays its main menu page.</p> <p>DDTS stores the information in its database and notifies (via e-mail) the SEO SM and the CCR originator of the update.</p>	3.4.5.6-4

3.4.5.7 Postconditions

COTS software upgrade is installed.

CCR record covering the COTS software upgrade installation is stored in the DDTS database.

Baseline Manager record describing the change to the baseline is stored in the SMC and sites XRP II databases.

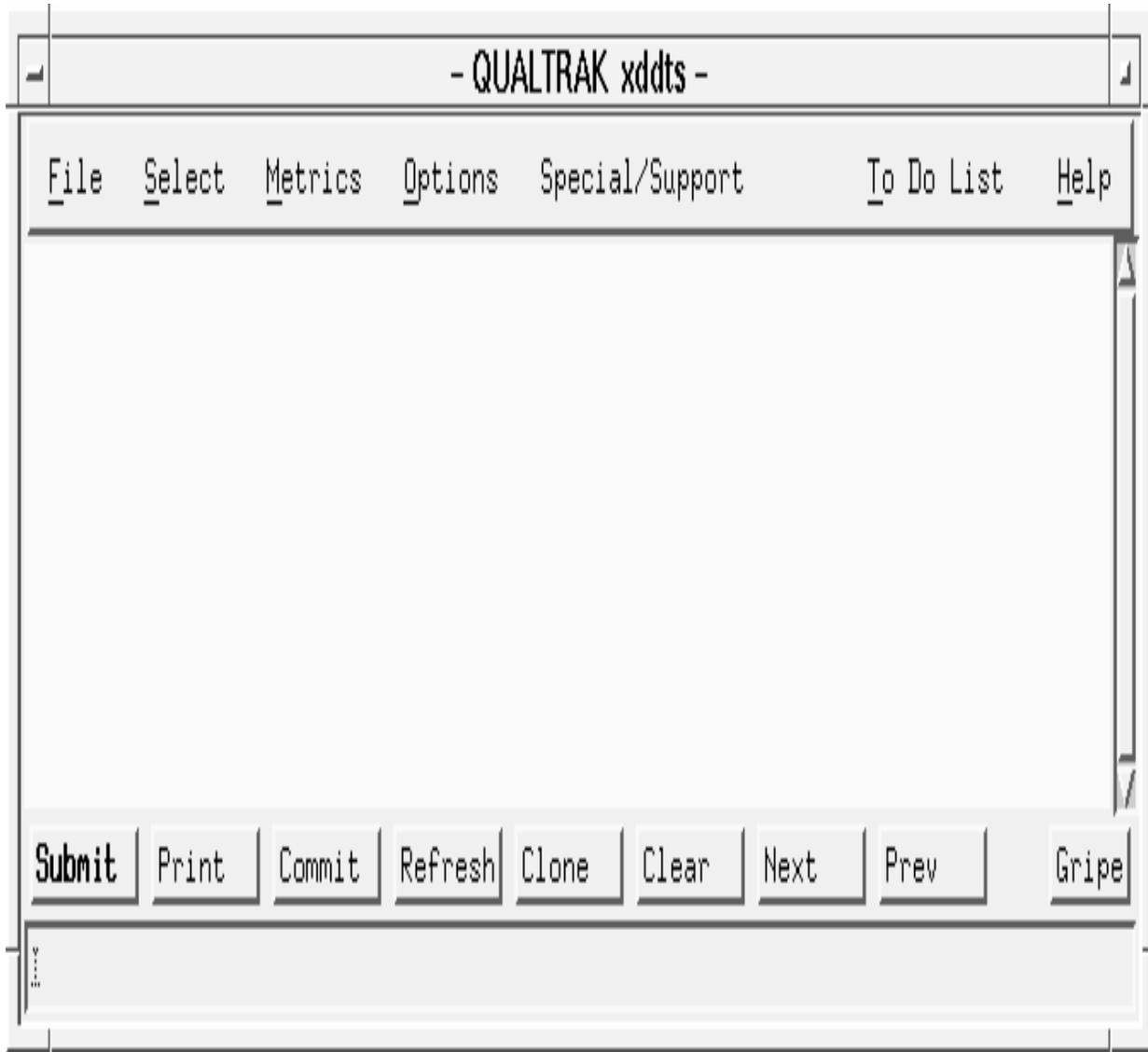


Figure 3.4.5.6-1. DDTS Main Display

Defect

Modify Change_State Links Cfg_Mgt Help

```
*****
*
*  S U B M I T   A   N E W   D E F E C T   *
*
*****
```

Submit to which class of projects: software█

Project name:

'?' for context sensitive help, 'esc' to back up, 'control-C' to abort

Figure 3.4.5.6-2. DDTs New Request Submission Form

Defect	
<u>M</u> odify	<u>C</u> hange_State
<u>L</u> inks	<u>C</u> fg_Mgt
<u>H</u> elp	
Software: MS Word Upgrade	EP4_Dev Version: 9
Headline: upgrade of word processing software	
DETECTION INFORMATION	
Detection method[*]: customer use	
Detected in phase[*]: informal review	
Test program name:	
Test system:	
Version of OS:	
Problem severity (1 = Showstopper)[*]: 3	
Affects segment:	
Affects subsystem:	
Need fix by:	
Related CCR #:	
Found in release:	
Phone number: 925-0518	
Do you want to be notified of changes to this defect? Y	
Enhancement request? Y	
`?' for context sensitive help, `esc' to back up, `control-C' to abort	

Figure 3.4.5.6-3a. DOTS New Request Form

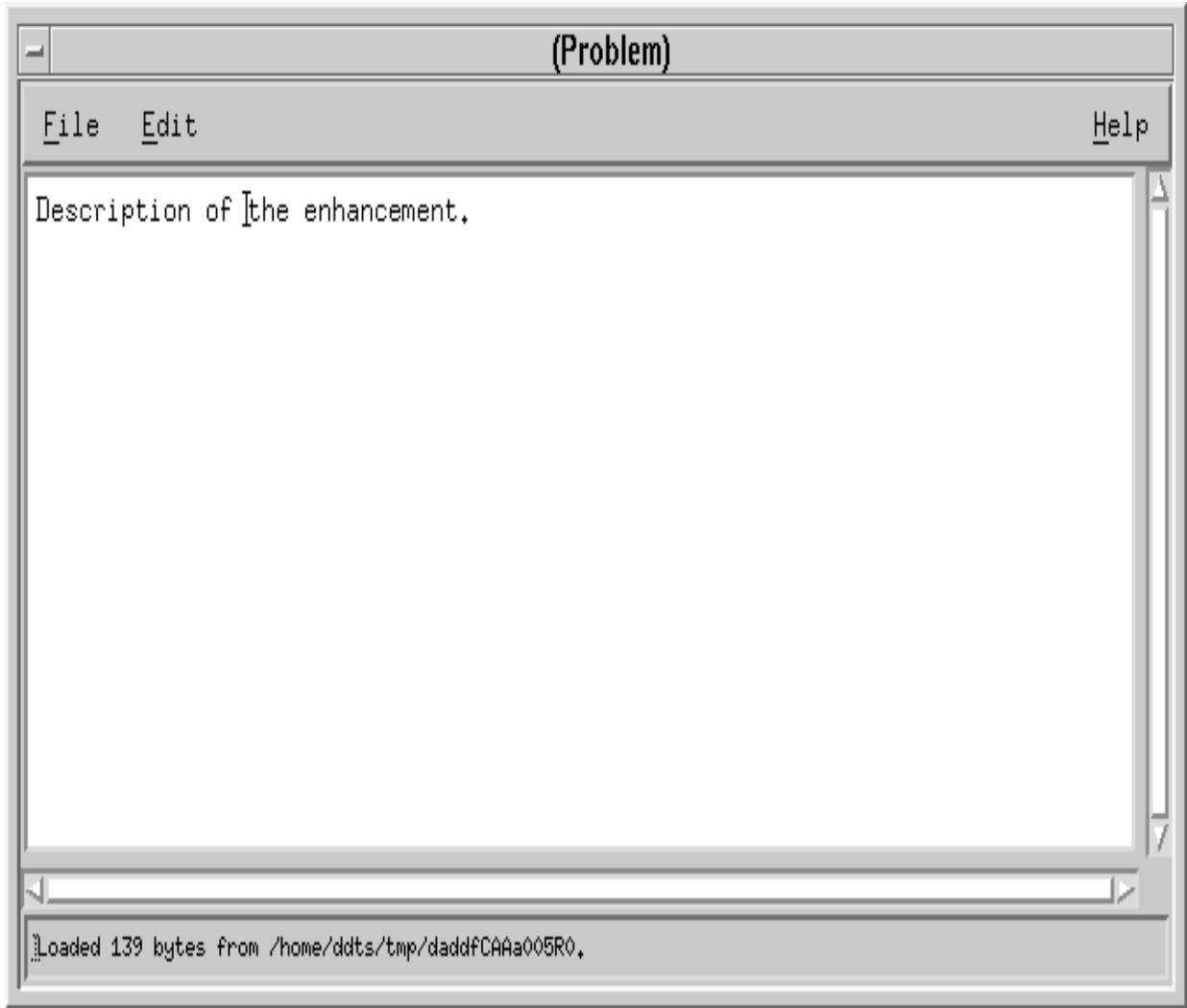


Figure 3.4.5.6-3b. Continuation of New Request Form

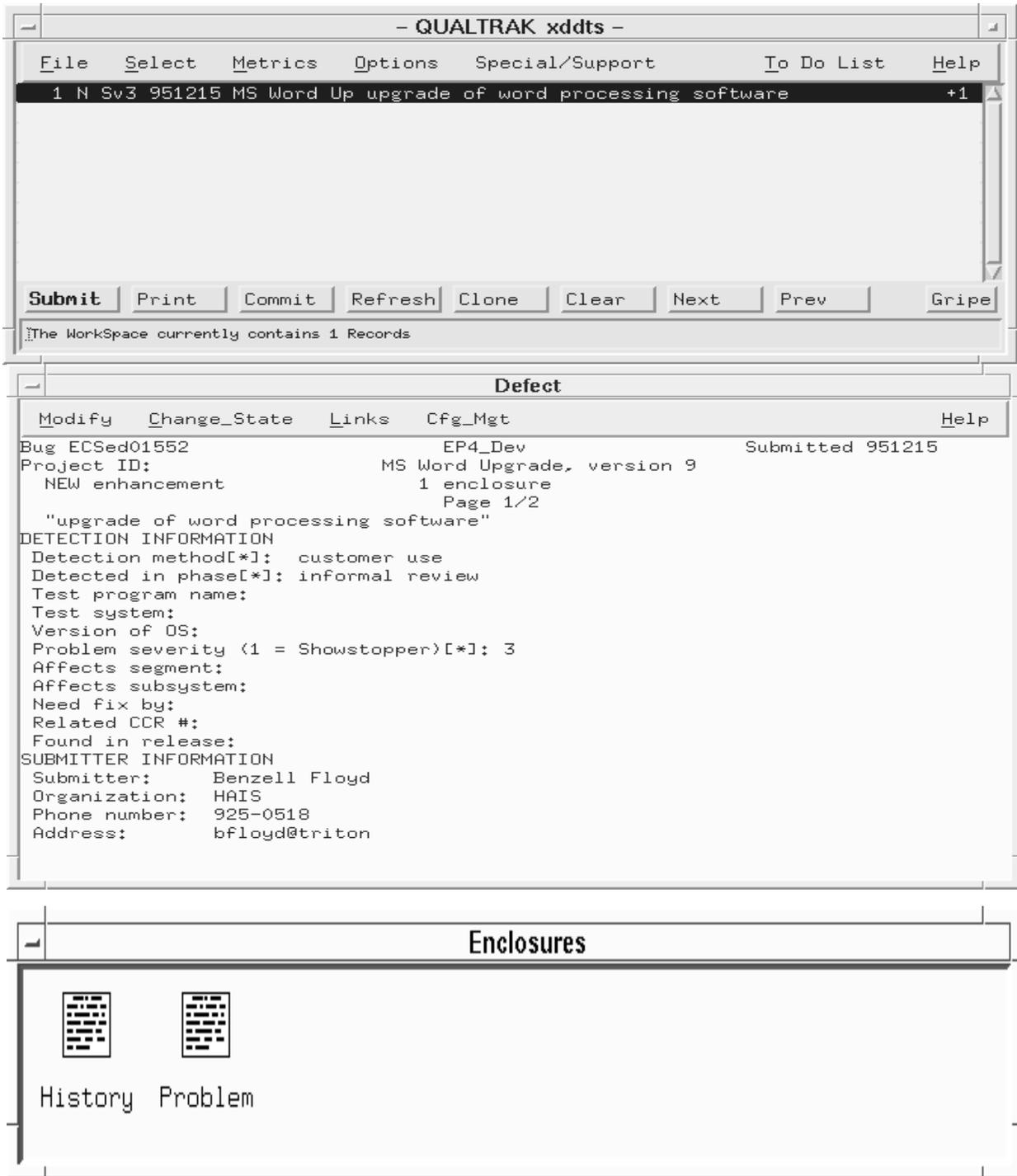


Figure 3.4.5.6-4. DDTs Record

