

# Opponent testing report – DECA software (DevTeamware)

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## 1. Introduction

Our task was to test the DevTeamware's software called DECA. DECA is software for handling documents and templates. The main goal was to test the software as an "outsider" to find possible bugs and flaws. It is often much more efficient to detect problems this way than testing only inside the project group. The tests were based on the DevTeamware's Test Case-document v1.2 and we added also some ad hoc tests trying to cover different kinds of situations. All the tests were made on April 5. 2002 at the Comptel Oyj building. Testers were Rami Karjalainen and Antti Aarnio.

## 2. Test environment

The test equipment included DevTeamware's laptop running Windows 2000 Professional operating system with service pack 1. Additional software needed was Tomcat, J2EE, db4o and a web browser Internet Explorer 5.5 with service pack 2. These are specified more accurately in the DECA technical specification document.

## 3. Tests and test cases

These test cases have been taken straight from the DevTeamware's Test Case-document. The results and observations have been added to every section and they are represented in bold text.

### TEST 1:

**Function:** Requirements 1, 2 and 3

**Test description:** One can open a document by entering a URL to the browser. There should be authentication of users.

**Acceptance criteria:** After entering the URL, DECA opens the document in browser after authenticating the user.

**Result:** **OK**

**Observations:**

### TEST 2:

**Function:** Login Function

**Test description:** The username and password grant access and open the Welcome to DECA view.

**Acceptance criteria:** -

**Result:** **OK**

**Observations:**

**TEST 3:**

**Function:** Requirement 4  
**Test description:** One can read a documents with DECA.  
**Acceptance criteria:** Must be usable at a 800x600 resolution too.  
**Result:** OK  
**Observations:**

**TEST 4:**

**Function:** 3.5.2.1. Browsing Related Documents  
**Test description:** The documents belonging to the same group are presented to the user in a menu like fashion so that the user can easily change between the documents.  
**Acceptance criteria:** -  
**Result:** OK  
**Observations:**

**TEST 5:**

**Function:** Requirement 5  
**Test description:** One can view two documents side by side.  
**Acceptance criteria:** Must have two frames showing the documents, or be able to position two separate browser windows for dual reading.  
**Result:** OK  
**Observations:** **Difficult to accomplish. 2 separate windows were used...**

**TEST 6:**

**Function:** Requirements 6 and 7  
**Test description:** Start a new document. Select a template as the basis of the document.  
**Acceptance criteria:** A new document cannot be started from scratch, must start from a template.  
**Result:** OK  
**Observations:** **Browsing window should be available when creating document (so that a user can browse existing groups). Otherwise all the templates must be remembered.**

**TEST 7:**

**Function:** Requirement 8  
**Test description:** The system must have a text editor.  
**Acceptance criteria:** Must be able to edit existing documents. Must be usable at a 800x600 resolution too.  
**Result:** FAILED  
**Observations:** **“Exception: class java.lang.RuntimeException  
Cannot add after a non struct list : 0”  
Happened when trying to add a new chapter (first chapter). Doesn’t work on any given inputs.**

**TEST 8:**

**Function:** Requirement 8 plus  
**Test description:** Document editing - additional features. Can insert line breaks (<BR> tags). Can insert inline images (<IMG> tags). Can insert hyperlinks (<A HREF="">).  
**Acceptance criteria:** -  
**Result:** FAILED

**Observations:** See the previous test case

**TEST 9:**

**Function:** 3.3.5.1. Creating Chapter, 3.3.5.2. Removing Chapter

**Test description:** Document editing - Can insert a new chapter at desired point in the document. Can remove a chapter.

**Acceptance criteria:** Removal must remove all sub-chapters of removed chapter.

**Result:** **FAILED**

**Observations:** **Could not perform -> could not create chapter all**

**TEST 10:**

**Function:** 3.3.5.3. Moving Chapter (Cut and Past)

**Test description:** Document editing - Can move a chapter inside a document.

**Acceptance criteria:** Moving takes all the sub-chapter of moved chapter with it.

**Result:** **FAILED**

**Observations:** See the previous test

**TEST 11:**

**Function:** Requirement 9

**Test description:** Attaching a document to a document.

**Acceptance criteria:** -

**Result:** **FAILED**

**Observations:** **Could not perform -> no mentioning about this operation in the user's guide! Too vague wording in the scenario and the requirement.**

**TEST 12:**

**Function:** Requirements 10 and 11

**Test description:** 10: Granting read document, edit document, comment on document and comment analysis rights to users. 11: Adding metadata such as keywords to help users find the document.

**Acceptance criteria:** -

**Result:** **FAILED**

**Observations:** **10. Different right policies have not been implemented.  
11. Adding a comment throws an exception.**

**TEST 13:**

**Function:** 3.3.4. Copying Document and 3.5.2.2. Selecting Document Group (moving to other group)

**Test description:** An existing document can be copied or moved to another document group and name.

**Acceptance criteria:** The system will verify that the group-name combinations will remain unambiguous.

**Result:** **FAILED**

**Observations:** **Could not perform -> no mentioning about this in the user's guide or not implemented!**

**TEST 14:**

**Function:** 3.3.2. Removing Document  
**Test description:** An existing document can be removed from the system.  
**Acceptance criteria:** Removing a document requires special privileges.  
**Result:** **FAILED**  
**Observations:** **Could not perform -> no mentioning about this in the user's guide or not implemented!**

**TEST 15:**  
**Function:** Logout Function  
**Test description:** Clicking on the Log Out link should log the user out of the system.  
**Acceptance criteria:** -  
**Result:** **OK**  
**Observations:**

**TEST 16:**  
**Function:** Requirement 12  
**Test description:** The system can list what documents it contains.  
**Acceptance criteria:** -  
**Result:** **FAILED**  
**Observations:** **Very long exception message and Servlet exception: Browser ID Lost**

**TEST 17:**  
**Function:** Requirement 13  
**Test description:** Find documents by document type.  
**Acceptance criteria:** -  
**Result:** **FAILED**  
**Observations:** **Very long exception message and Servlet exception: Browser ID Lost**

**TEST 18:**  
**Function:** Requirement 14  
**Test description:** The system must show the relationships between documents.  
**Acceptance criteria:** -  
**Result:** **OK, but relations can be wrong**  
**Observations:** **Could not create any relations between documents**

**TEST 19:**  
**Function:** Requirement 15  
**Test description:** User must be able to add a comment to a chapter.  
**Acceptance criteria:** Must be usable at a 800x600 resolution too.  
**Result:** **OK**  
**Observations:** **This works only if the template has a chapter on default. Adding a chapter to document does not work without this.**

**TEST 20:**  
**Function:** Requirement 16  
**Test description:** Many users can edit the same document.  
**Acceptance criteria:** -  
**Result:** **OK**  
**Observations:** **This works but adding comments as a different user, posts the messages as same/latest user. So the author seems to be always the same user.**

**TEST 21:****Function:** Requirement 17**Test description:** User must see the amount of comments in a document, and/or the timestamp of the latest comment.**Acceptance criteria:** -**Result:** **OK****Observations:****TEST 22:****Function:** Requirement 18**Test description:** User must be able to read the comments.**Acceptance criteria:** Must be usable at a 800x600 resolution too.**Result:** **OK****Observations:****TEST 23:****Function:** 3.4.2. Browsing Comments (also requirement 18)**Test description:** Should have five different views into the comments, basic, advanced, basic printable, advanced printable and Filtered Comments View.**Acceptance criteria:** -**Result:** **FAILED****Observations:** **This has not been implemented!****TEST 24:****Function:** Requirement 19 (also 3.5.1.2. Selecting Comment Category)**Test description:** A user with analysis rights can sort the comments into analysis groups.**Acceptance criteria:** -**Result:** **FAILED****Observations:** **There is no different user rights.****Error 2. "If someone is setting the comment category, the user is notified." Seems impossible to implement with current code.****TEST 25:****Function:** Requirement 20 (also 3.4.2.5. Filtered Comments View)**Test description:** Users can view the comments sorted by analysis group. Shows only the comments belonging to the specified group(s).**Acceptance criteria:** -**Result:** **FAILED****Observations:** **There is no different user rights****TEST 26:****Function:** 3.5.1.3. Selecting Comment State and 3.5.1.4. Removing Comment**Test description:** The user can select between unprocessed and processed states. Initially all comments are set to unprocessed state. The inactive state is set by the remove comment function.**Acceptance criteria:** -**Result:** **FAILED****Observations:** **There is no different user rights, REMOVING OK.**

**TEST 27:****Function:** Requirement 21 (and 3.6.1. Creating Template)**Test description:** User can create a new template within DECA. Must report an error if enter an existing template name to the new template.**Acceptance criteria:** -**Result:** **Creating OK.****Observations:** **No errors if the name already exists****TEST 28:****Function:** 3.6.5. Editing Template**Test description:** Must be able to edit an existing template in the system if have the necessary user rights.**Acceptance criteria:** -**Result:** **OK****Observations:****TEST 29:****Function:** 3.6.2. Removing Template**Test description:** Must be able to remove a template from the system if have the necessary user rights.**Acceptance criteria:** -**Result:** **FAILED****Observations:** **Not implemented****TEST 30:****Function:** 3.6.4. Copying Template**Test description:** Must be able to copy a template in the system if have the necessary user rights.**Acceptance criteria:** -**Result:** **FAILED****Observations:** **Not implemented****TEST 31:****Function:** Requirement 22 (and 3.5.3. Changing Parent Template)**Test description:** A document's "parent" template can be changed to point to another template.**Acceptance criteria:** -**Result:** **FAILED****Observations:** **Not implemented****TEST 32:****Function:** Requirement 23**Test description:** Comments have states such as "not yet done", "done" and "inactive". The analyzer role must be able to change a comment's state. Default state must be "not yet done".**Acceptance criteria:** -**Result:** **FAILED****Observations:** **Not implemented**

**TEST 33:****Function:** Requirement 24**Test description:** User can add comments to existing comments. (Probably unlimited nesting depth.)**Acceptance criteria:** -**Result:** **FAILED****Observations:** **Existing comments cannot be edited****TEST 34:****Function:** Requirement 25 (and 3.7.1.1. Version Naming) (and 3.7.2. Advanced Version Management)**Test description:** A document can be labeled as "official" or be given a name. Then the document gets a version number and/or a name.**Acceptance criteria:** All of a document's comments are set to the "inactive" state when set as a official version.**Result:** **OK****Observations:** **No states available****TEST 35:****Function:** Requirement 26 (and 3.7.1. Basic Version Management)**Test description:** DECA can display old versions of a document.**Acceptance criteria:** -**Result:** **OK****Observations:****TEST 36:****Function:** Requirement 27**Test description:** A document can be printed out, with or without comments.**Acceptance criteria:** -**Result:** **FAILED****Observations:** **Not implemented****TEST 37:****Function:** Requirement 28**Test description:** User can select chapters from the template for the report.**Acceptance criteria:** -**Result:** **FAILED****Observations:** **Not implemented****TEST 38:****Function:** Requirement 29 (and 3.6.7. Generating Report)**Test description:** DECA can generate a report that shows all the selected-in-template chapters from the documents that are based on the template in question.**Acceptance criteria:** -**Result:** **FAILED****Observations:** **Not implemented**

**TEST 39:****Function:** 3.6.8. Verify Template Compliance**Test description:** This function is used to verify that the document fulfils the requirements of the template it is based upon.**Acceptance criteria:** Not going to implement this.**Result:** **No results****Observations:****TEST 40:****Function:** 3.8.1. Show Statistics**Test description:** Shows information about the use of the system on a general level such as number of comments submitted per week, number of document retrievals, etc.**Acceptance criteria:** -**Result:** **FAILED****Observations:** **Not implemented****TEST 41:****Function:** 3.9. User Dependent Views**Test description:** A) If a comment is marked as read, the system will not display it to the user, if all the sub-comments are also marked as read. B) If a chapter is marked as read and all its sub-chapters are marked read as well, the software will show it normally. Otherwise it will somehow emphasize the chapter.**Acceptance criteria:** -**Result:** **FAILED****Observations:** **Not implemented**

TOTAL:

OK: 16 cases

FAILED: 25 cases

### **3.1 Ad hoc tests**

**Case 1:**

We tried to use help option locating on the upper right corner of the user interface.

**Result:**

UI throws an exception "help.jsp not available"

**Case 2:**

We logged in to the system with two different user names. Then we tried to add comments to documents.

**Result:**

The UI shows that there are two different users, but if the first user wants to add comments or something, he/she will post the comment with second user's name. Also the welcome message is now same for both of the users.

**Case 3:**

We tried to use the “Convert to PDF”- button. The document was the one with two different colorful pictures.

**Result:**

When formatted to PDF, chapter 2 picture is not shown! Chapter one is ok, but second chapter is not.

**Case 4:**

We tried to use different arrow keys locating on the user interface. (add, remove, etc.)

**Result:**

All the three arrow buttons do the same thing, add a chapter. Only the X-button removes a chapter.

## 4. Summary and comments

Suggestions:

- The user interface is not intuitive. Arrows, X:ses and all other control ”buttons” are difficult to use because there is no help about their functions. Some kind of improvement is definitely needed.
- User guide (introduction) doesn’t have any index, and it is not up to date comparing to program. Some operations are difficult to perform because the manual does not contain any help. For example attaching a document to another or moving documents.
- Main operations like removing document or copying it etc. do not have any visible buttons. It is very difficult to discover the right operations without them.

Summary:

The system has a good idea. With all the functions described in Technical Specification it would be very useful. But in some reasons most of the functionality is not implemented. The software does not match to Specifications. The test cases are quite extensive but many of those cases can not be performed correctly.

Also the existing functions produce exceptions and errors. It seemed to be impossible to create new templates and chapters. Help-button and user’s guide do not provide any remarkable guidance. The user interface is difficult to use because there is no explanations about buttons etc.

Because so much functionality is missing and software generates errors it is very difficult to evaluate the current version. Over 50 % of the tests failed so there is a lot to do to improve the software. Perhaps the Technical Specification-document was made too extensive because it has not been carried out adequately.