Testing Report

RoboNews.com

"Your Source For Robotics Coverage"

Client

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1. Introduction

RoboNews.com, is similar to any website with the potential to receive large amounts of user traffic and significant amounts of data, must be thoroughly tested to ensure stability, expose flaws in the system, and ensure the best possible experience for the user.

1.1 Purpose of This Document

This document is intended for system administrators, quality assurance teams, and other users interested in reviewing the test procedure used for the development of the first iteration of this product. This report will define and analyze the testing process and describe the results.

1.2 References

Use cases from the System Requirements Specifications (SRS) document.

2. Testing Process

2.1 Description

Use cases as outlined by the System Requirements Specifications document are the basis for which each particular spiral are thoroughly tested. Team members contributed various other use cases, test methods, and outlined potential implementations issues that could potentially arise.

Testing was done in a variety of methods, from the standard individual unit testing to white box testing and eventually to black box, user driven testing. Individual units were thoroughly

tested with every possible potential outcome and misuse in mind. Upon successfully completing rigorous individual unit testing, integration testing commenced to ensure that modules worked together as intended.

2.2 Testing Sessions

Test Number	Date	Location	Time Started	Time Ended	Performed By	Use Cases
S1A S1B	2/27/2013	Home	9:30 PM	11:00 PM	Sven Rivera	• User Login •Admin Login •Navigating Links
S2A S2B	3/30/2013	Home	3:00 PM	4:30	Sven Rivera	•Tag Search •Navigating the website
S2C	4/3/2013	UMBC	7:00 PM	8:00 PM	Sven Rivera	•Search Auto Complete

2.3 Impressions of the Process

The testing process was overall very effective in this particular spiral. The combined usage of regular "expected" use of the website combined with a more erratic, error prone approach to testing produced a very good picture of the strengths and weaknesses of the website. For having just set up the skeleton of the website with minimal functionality, the website functions quite well and effectively implements the create username, login and limited navigational button interface that the website offers at this time.

The strongest component of the website as of this spiral is the user and administrator login. User login creation is very straightforward and correctly communicates with the database in both creating and fetching use data and checking it for correct login information. The weakest portion of the website at the moment is the navigational links. At the moment, though they are displayed, lead to errors upon clicking them , and also do not allow the user to log off. Detailed information about individual modules follow below.

3. Test Results

Testing was conducted using a series of typical use cases and small variations of them that would not be outside the boundaries of normal use. In addition, non-standard boundary conditions were also tested in order to ensure that the website properly handles invalid situations that could possibly result in improper website functionality.

3.1 Testing Suite

The table below outlines and describes each particular use case and their respective boundary conditions, valid and invalid inputs. Results normally fell within expected outcomes but issues were discovered with the password confirmation portion of the username creation module. Navigation also posed issues in sections of the website that had not yet been fully developed. The majority of the basic login and account creation features worked flawlessly.

S1A

Use Case	*Create User Login*
Valid Situation	**User creates a login consisting of a username, password and retype the password for confirmation.**
Invalid Situation	**1. User enters a blank username or password upon creation.** **2. User enters their username with varying upper and lower case letters differing from their original username.** **3. User enters a non-matching password when asked to confirm it during account creation**
Purpose	**To ensure that users can create logins under the right conditions.**
Expected Results for Valid Situation	**The username and password is created and properly stored in the sql database and properly confirms the retyped password confirmation.**
Expected Results for Invalid Situation	**1. The website will reject the blank entry and reprompt them for a username or password.** **2. Mixed case username should be accepted** **3. Non-Matching passwords should be rejected and re-prompted**
Issues/bugs Found	**1. Creating a non-mixed case username but attempting to login with mixed case (i.e. John123 but inputting jOhn123) results in an error** **2. Entering a password but leaving the confirm password blank does not result in an error and allows a user to successfully create an account**

S1B

Use Case	*Navigating the Website*
Valid Situation	1. Clicking on a variety of different links results in appropriate page or information being displayed. 2. Clicking the back button after logging in
Invalid Situation	Clicking on a non-functioning portion of the website.
Purpose	To test how the website handles navigating between links and buttons that are currently developed and functioning (such as create login) or buttons that currently do not have a purpose
Expected Results for Valid Situation	1. The website takes you to the appropriate page and correctly displays the information and content.
Expected Results for Invalid Situation	The website will inform the user that the page they requested is not currently available.
Issues/bugs Found	1. Clicking on an invalid link does not gracefully inform the user that the particular page they are attempting to navigate to is not completed, but rather gives a standard, non-descriptive error.

S2A

Use Case	*Tag Search*
Valid Situation	1. Clicking on the search bar and entering a desired tag search term 2. Entering nothing in the search box
Invalid Situation	The user enters garbage (random strings of numbers and characters into the search term)
Purpose	To test how the website allows the user to search for robot news links either through submitter defined tags and simultaneously through looking through the actual user submitted review of the link.
Expected Results for Valid Situation	1. The website displays the results of the user's search term looking through both tags and the link's review, displaying an image of the link, the review, and a hyperlink allowing them to navigate to that site. 2. The search box lists and auto completes tags as the user enters them. 3. The website displays all links in order of most to least recently submitted.
Expected Results for Invalid Situation	The website will not display any search results but will not give an error.
Issues/bugs Found	1. Regardless of whether an appropriate and valid search or blank search is entered into the search field, it still displays "Pages of search results will go here!"

S2B

Use Case	*Navigating the Website*
Valid Situation	1. Clicking on a search result or on an article link from the list of most recent articles 2. Logging into an account 3. Logging out of an account
Invalid Situation	1. Entering in an invalid username or password
Purpose	To test how the website handles navigating between links and buttons that are currently developed and functioning (such as create login) or buttons that currently do not have a purpose
Expected Results for Valid Situation	1. The website will take you to the external link that was clicked on and properly display the article contents. 2. Logging in will hide the login information sidebar and display the logout button in it's place. 3. The user will be logged out and will redisplay the login form on the right side of the page.
Expected Results for Invalid Situation	The website will inform the user that they entered an invalid username/password and reprompt them.
Issues/bugs Found	1. Successfully logging in causes the page to go to a blank page that informs the user that they have successfully logged in, but forces the user to have to hit the back button to view the page. 2. Entering an invalid

	password/username will take the user to another blank page that informs them of the invalid entry, but forces them to have to click the back button to return.

S2C

Use Case	*Search Auto Complete*
Valid Situation	1. Enter partial search terms to see a whole list of possible tag options
Invalid Situation	1. The user enters garbage (random strings of numbers and characters into the search term)
Purpose	To see how the website allows the user to enter in partial search terms and return to the user a wide range of completed tag search terms without actually clicking the search button.
Expected Results for Valid Situation	1. The website will display all tags that somewhere contain the portions of text that the user is still entering (i.e. 'Na' could display 'NASA' and 'nautical').
Expected Results for Invalid Situation	The website will not display any partial search terms but will also not cause any error.
Issues/bugs Found	Works exactly as intended
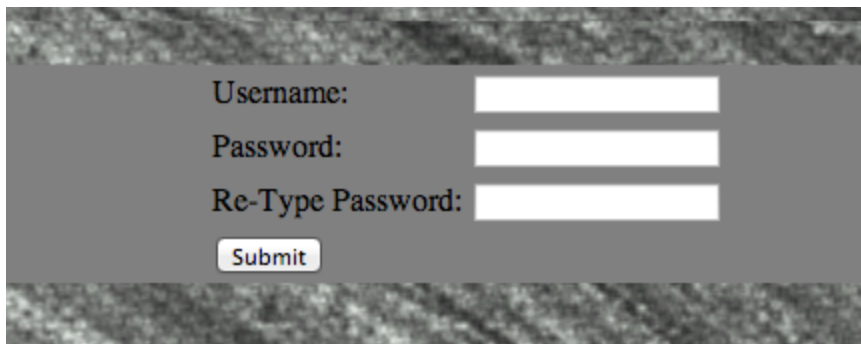
3.2 Test Results

The results from testing are outlined in the images below.

S1A Use Case: Creating a user login
Performed By: Sven Rivera
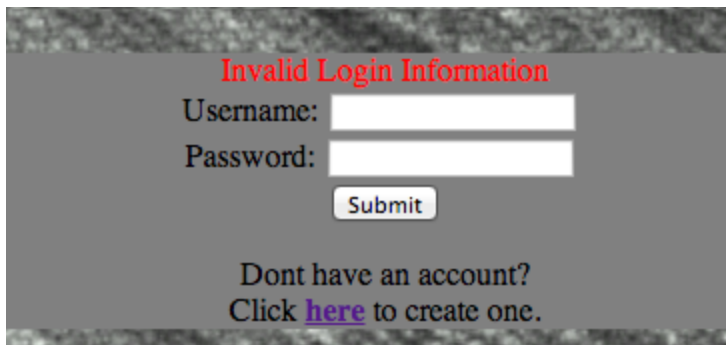
1. Clicking on create user login correctly navigates and displays the login creation portion of the site.

2. Logging in without inputting a password or entering an invalid password:
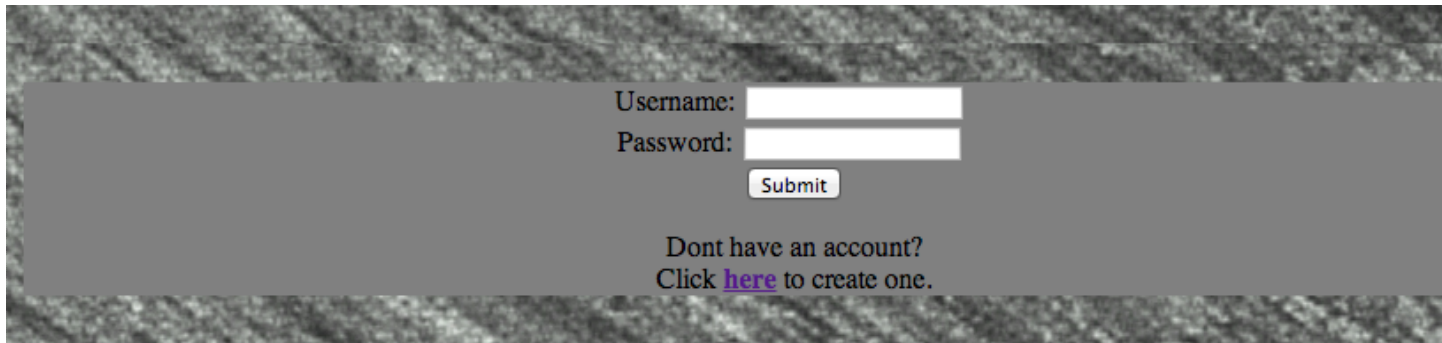
3. •Correctly creating a username, password and matching password

confirmation, navigates back to the user login screen

   •Creating a username but inputting nothing in the password confirmation, navigates back to the user login screen *Bug*

S1B Use Case: Navigating the website

Performed By: Sven Rivera

1. Clicking a link or button that has not yet been currently developed or under construction, resulting in an error *Bug*

Not Found

The requested URL /~gb4/CMSC345/Link 1 was not found on this server.

S2A Use Case: Tag Search

Performed By: Sven Rivera

1. Entering in a search term on the search bar, then clicking search. At the moment, the only links displayed are the most recently added articles (as it should be).
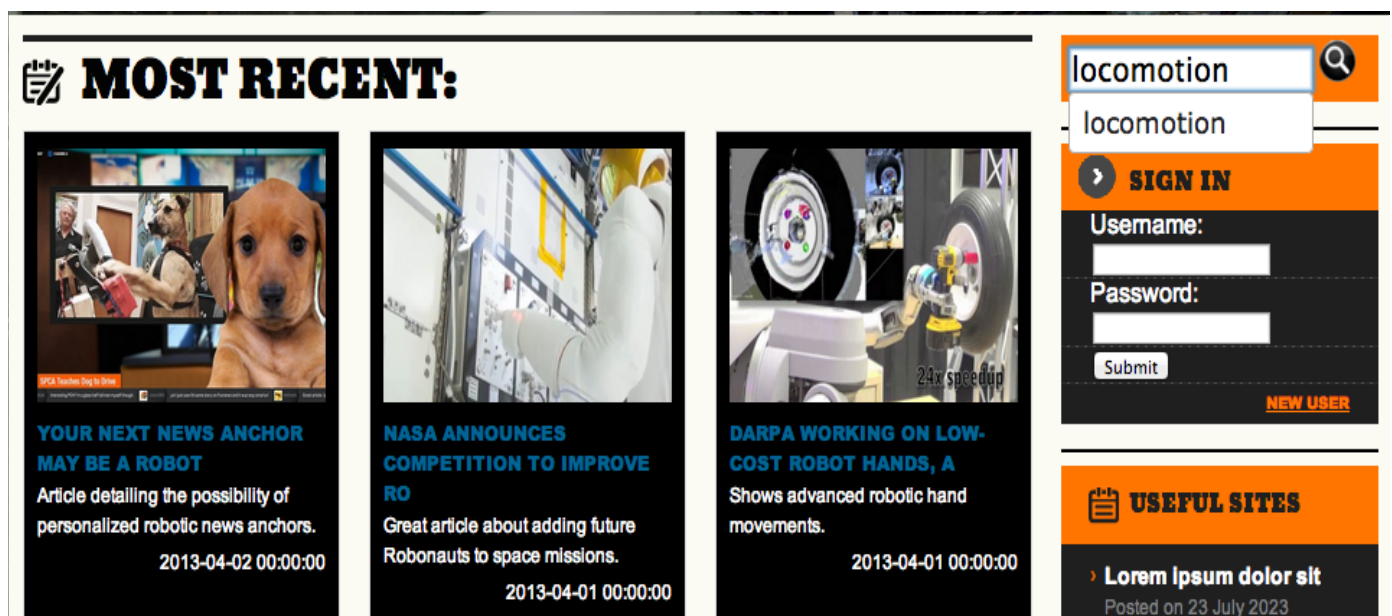
2. After clicking search, any article containing either 'locomotion' as a tag OR contains that word somewhere as part of the user submitted review returns that article as a result.

RESULTS:4
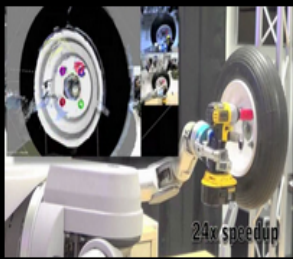
DARPA WORKING ON LOW-COST ROBOT HANDS, A

Shows advanced robotic hand movements.

2013-04-01 00:00:00
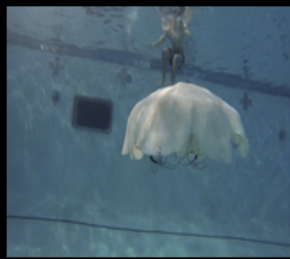
GIANT ROBOT JELLYFISH REPORTING FOR RECO

Brilliant work done by Virginia Tech demonstrating a long lasting, 'living' jellyfish

2013-04-01 00:00:00

TERRADYNAMICS: TECHNIQUE COULD HELP DESI

Great article on robot locomotion!

2013-03-26 00:00:00

ROBOTIC FISH GAIN NEW SENSE: NAVIGATE WA

Interesting article on robots navigating weather conditions.

2013-03-26 00:00:00

3. Entering garbage into the search term displays no search results.

S2B Use Case: Navigating the website

Performed By: Sven Rivera

1. Upon entering the site, the website displays all of the most recent robot news links submitted by users
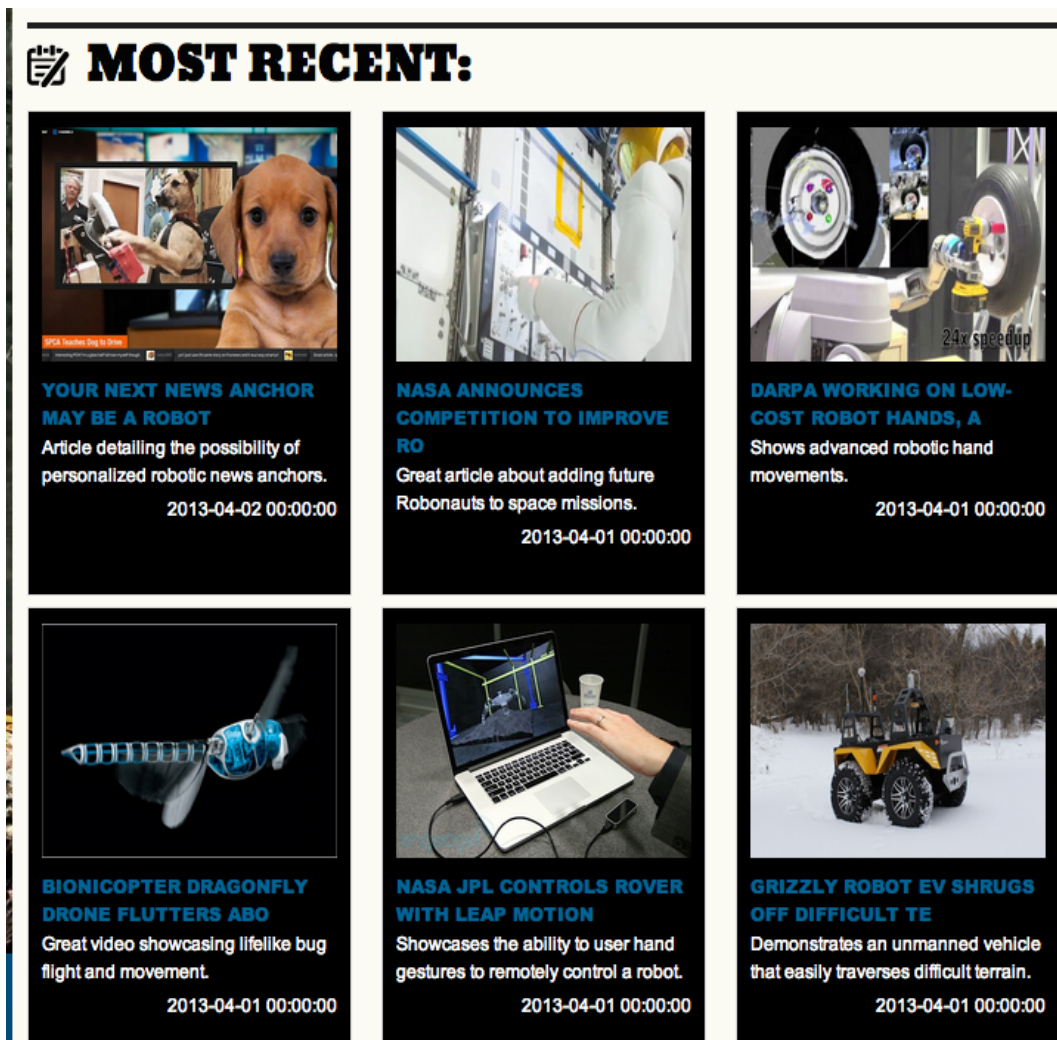
2. Clicking on an article link navigates the user to the desired news article page.

Your Next News Anchor May Be a Robot

A new startup wants to turn this article into a newscast. Is that what news consumers really want?
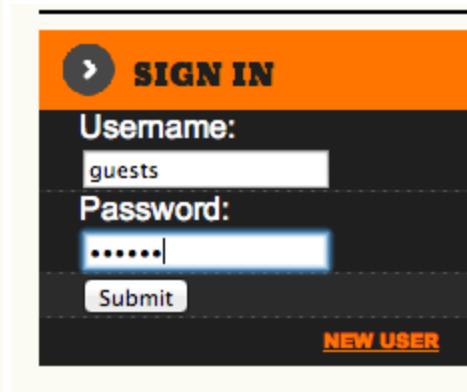
By DANIELLE KURTZLEBEN

April 1, 2013 | RSS Feed | Print

SPCA Teaches Dog to Drive

Would you prefer your news read to you by a puppy?
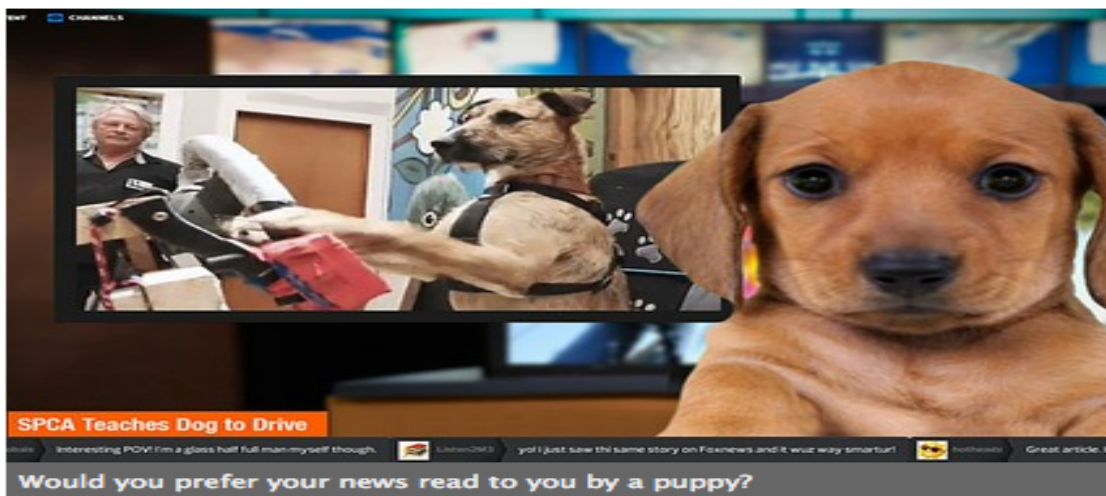
There may be a new way to do TV news. One that doesn't involve tuning out for human interest stories and morning-show anchors playing with baby animals. One that allows viewers to pick out exactly which stories they hear and which they skip. Not to mention one that could diminish the drama of the Matt Lauers and

3. Entering in a username and password correctly asks for the correct username and password length while making the username and password field disappear, replacing
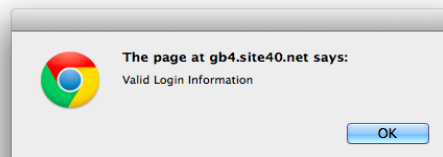it with the logout button.

4. Bug: The website upon receiving an invalid username/password and in addition even valid login information navigates the user to a page informing them of their successful or unsuccessful login, but forces the user to have to click the back button to continue to use the site. Unsuccessful logins also in addition cause a major security leak revealing portions of the database's internal structure.

•For an invalid login:

```
SELECT * FROM `robo_users` WHERE `User_Name` = 'guests'
```

The page at gb4.site40.net says:
Valid Login Information

OK

• For a valid login:
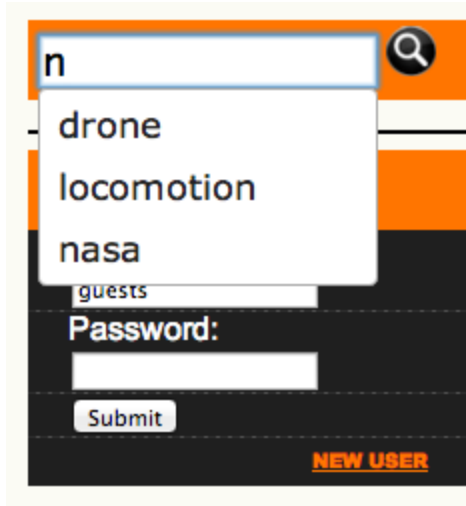
The page at gb4.site40.net says:
Valid Login Information

OK
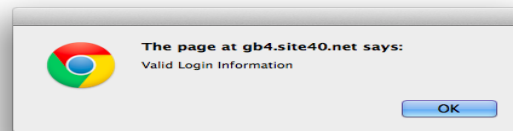
S2C Use Case: Search Auto Complete

Performed By: Sven Rivera

1. Entering in a partial search term into the search autocompletes the search.

4. Appendix A – Team Review Sign-off

This document has been collaboratively written by all members the team. Additionally, all team members have reviewed this document and agree on both the content and the format. Any disagreements or concerns are addressed in team comments below.

Team

Name _____Date:_____
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5. Appendix B– Document Contributions

The overall document was created by Sven Rivera and reviewed by other group members.