

Speedpost



भारत सरकार
GOVERNMENT OF INDIA
इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी विभाग
Department of Electronics & Information Technology
संचार और सूचना प्रौद्योगिकी मंत्रालय
Ministry of Communications & Information Technology
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संख्या/No. ETDC-HYD/08/IT/ 16-17

दिनांक/Date: 27.02.2017

To,
Mr. Ajay Babu Peddi,
Asset Manager (Infrastructure)
Information Systems
APCRDA (Andhra Pradesh Capital Region Development Authority)
Lenin Center, Governorpet,
Vijayawada-520002

Sub: Forwarding of Functionality Test Report for Plot Allocation Web Application

Sir,

Please find the enclosed original physical copy of functionality test report for plot allocation web application.

Kindly acknowledge the receipt of the same.

Enclosures:

1. Functionality Test Report for Plot Allocation Web Application

Thanking You,

Yours faithfully,

(T V Subramanyam)
DIRECTOR
STQC IT SERVICES

STQC IT – SERVICES FUNCTIONALITY TEST CLOSURE REPORT FOR Plot Application System	
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Functionality Test Report

For

Plot Allocation Web Application

February, 2017

STQC - IT Services

STQC Directorate, Department of Information Technology,
Ministry of Communications & Information Technology,
Kamala Nagar, ECIL PO,
Hyderabad-500062

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0.0 Executive Summary:

Plot allocation is a web application in which APCRDA allocates the plots to farmers according to their proportionate land on a village basis.

1.0	Client Details	
1.1	Client	M/s Andhara Pradesh Capital Regional Development Authority Vijayawada
1.2	Address of the Client	Lenin Center, Governor Pet, Vijayawada 520002.
2.0	Description of the Software Application under Test	
2.1	Software Application Nomenclature	Plot Allocation System
2.2	Software Version No.	Version 1.0
2.3	Software Release Date	11-09-2016
2.4	Software Application Description	Plot allocation is a web application in which APCRDA allocates the plots to farmers according to their proportionate land on a village basis.
2.5	Software Application Developing Organization	M/s Tata Consultancy Services, Hyderabad. (APOnline)
2.6	Applicable Reference Documents	FRS Version 1.0
2.7	Software Application Documents Submitted	FRS Version 1.0
3.0	Test Details	
3.1	Name & Address of the Testing Organization	STQC IT Services, Electronic Test and Development Center, Kamala Nagar, ECIL PO, Hyderabad, Telangana.
3.2	Test Objective(s)	The key aim of testing was to validate the software application against the prescribed functional requirements as per software documentation i.e., FRS. The objective was to determine that: <ul style="list-style-type: none"> • The extent to which requirements prescribed in the FRS have been fulfilled (i.e., completely & correctly implemented). • The extent to which applicable regulations, standards and specifications set out in the FRS are met. • The defects/ non conformities are timely identified & addressed.
3.3	Scope of Testing	Functionality testing of Plot Allocation web application

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3.4	Type of Testing	Independent third party testing of software application
3.5	Test Approach & Methodology	<input type="checkbox"/> The software application was tested as per the functional requirements for business functions and applicable regulations, standards and policies specified in the Software documentation. <input type="checkbox"/> Testing was carried out using black box approach based on test scenarios & test cases derived from the functional requirement specifications of the software application. <input type="checkbox"/> The test cases for valid as well as invalid conditions were prepared & executed.
3.6	Test Standards	IEEE Std 829 for Software and System Test Documentation
3.7	Test Location	STQC IT Services Electronic Test and Development Center, Kamala Nagar, ECIL PO, Hyderabad, Telangana.
3.8	Test Data	The test data used for testing was generated based on test scenarios for both valid as well invalid cases.
3.9	Test Environment	Testing environment is configured by the client.
3.10	Test Tools	—
3.11	Test Setup Location	Test setups were used at: Client side setup location : STQC IT Services ,Hyderabad Server side setup location: TCS Data Centre, Hyderabad (as provided by client)
3.12	Test Team	Mr. T. V. Subramanyam , Director STQC IT Services Mr. Avishek Raychoudhury , SA 'A'
3.13	Period of Testing	8 th July 2016 – 03 rd Feb 2016 The results indicate the status of the application during the evaluation period only.
3.14	Hash of the Application Tested	Hash: 95b29bfafa743f0a0fc9b3fa4349f1c1 Date Time: 8/2/2017 2:56:30 PM Algorithm: MD5

4.0 Test Results:

Key Observations:

1. Repetition of allocating the same plot/plots to same farmer was observed in consecutive allocations in some plot allocations. Same was accepted by the Department via email by Director IT, APCRDA dated 22.12.2016.
2. Application will allocate the plots to the farmers in **ascending order** of "Plots per farmer".
3. A Farmer having multiple plots (>1 plot) are allocated Consecutive plots

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4. As per client mail dated 2.12.2016, application will allow
 - A. Maximum number of plots per farmer is 11.
 - B. Maximum numbers of farmers per run is 495
 - C. Maximum number of plots per run is 495
5. Plots of the same sub category (type of plots) are allocated in a run
6. Application is compatible only with Internet Explorer having Java 8.0 or above installed.

Not is Scope of STQC Testing:

1. Master Data:

- Planning Department of APCRDA will identify and provides **Master Plot Details** of each village to APONLINE.
- Concern Competent Authority (CA) of a village will provide the **Master Farmers Data** with chosen plot against each farmer.
- Key field in Master Farmers Data are “Option ID”, “Allotment ID” and “Sub Category”.
- Key field in Plot Master are “Sub Category” and “PLOT ID”.

2. Process at APONLINE:

- Master data (Plots, Farmers) will be posted in to backend database.
- Verification of equal farmers and equal plot ids.
- Generation of QR Code for each PLOT Code.

3. Backend process flow:

- Core Concept of Allocation is carried in Backend at data base level.
- Taking one plot ID and Plot Sub Category from Plot master which are available.
- Searching for available farmers under that Sub Category and picking one random farmer (Allotment ID).
- Marking (updating) the plot code as completed.
- Marking (updating) the farmer (Allotment ID) as completed.
- Repeating the same process for all Plot IDs until plot IDs of Plot master is completed.
- Placing that allocated data into trail if it's a trail run.
- Placing that allocated data into Final if it's a Final run.

4. Hash Generation Procedure:

- As per FRS,
A string is formed with signing values (1. Option ID, 2. Allotment ID, 3. ADHAAR NO, 4. Alloted plot ID, 5. Plot sub category, 6. Quantity, 7. Plot, 8. Digital Key Signature) and concatenating each value with '##' .Concatenated String is named as data. Then the data along with signature is sent to a signing function. This function generates the Hash and return the Hash String.

TCS PKI Component is used in the application for generating the Hash.

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S. NO.	Requirement Location	Requirement Description	Observation
1. Login			
URL: http://125.16.9.133/APCRDA/UserInterface/loginformnew.aspx			
User: Commissioner			
1.1	Login Page User ID: stqc-crda	Application shall have the facility to login into the application.	Complied With
2. Plot Allocation System			
URL: http://125.16.9.133/APCRDA/UserInterface/loginformnew.aspx			
User: Commissioner			
2.1	Plot Allocation System User ID: stqc-crda	Application shall have the facility for the user to click on the Plot Allocation tab.	Complied With
		Application shall contain master plots, grouped by sub category and master farmer details.	Complied With
		Application shall have the facility to click on the Allocate button to proceed for trial run or final run.	Complied With
		Application shall have the facility to select the type of allocation, i.e. Trial Run or Final Run.	Complied With
		Application shall have the facility to have at least one trail run in the allocation process before going for final Run	Complied With
		Application shall have facility to execute final run only once.	Complied With
		Application shall display a allocated list after clicking Trial Run or Final Run	Complied With
Application shall prompt the user to digitally sign-in upon clicking on Trial Run or Final Run button and on signing successfully, hash and allocated list shall be generated. The allocated list is then downloaded automatically in PDF Document format only once.			
		Trial Run can be performed more than once until final run is performed	Complied With


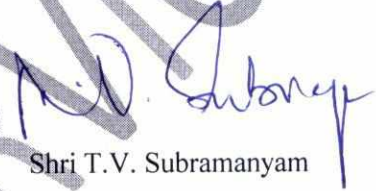
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S. NO.	Requirement Location	Requirement Description	Observation
		Upon selection of Final run, Application shall not allow any more allocation on the set of plots and the final allocated list should be frozen.	Complied With
		Hash shall be generated as per the Hash Generation Procedure. Hash of the Trial Runs for the current list of plots will be available in Hash Data Table Report.	Complied With (Hash Generation Procedure is out of scope of testing)
		Hash of the Final Runs for the all list of plots allocated can be verified in Hash Checking tab	Complied With
		<p>Activity Log</p> <p>Application shall record the following actions in the activity logs</p> <ol style="list-style-type: none"> 1. Home Page <ol style="list-style-type: none"> 1.1 User has landed on home page 1.2 User has successfully Logout 2. Plot Allocation Screen <ol style="list-style-type: none"> 2.1 User viewed Plot Allocation. 2.2 Data Reset 2.3 Allocated data for "Village Name" by "USER" 2.4 Trail Run " + (Run Number i.e 1,2,3) + " of "Village Name" has been generated by "USER" 2.5 Final Run of "Village Name" has been generated by "USER" 3. Hash Comparison Screen <ol style="list-style-type: none"> 3.1 "USER" viewed Hash Comparison Report 3.2 "USER" Accessed hash Details of Aadhaar Number:- " XXXXXX + ", Plot Code:- " + YYYYYYY 4. Last Login Report Screen <ol style="list-style-type: none"> 4.1 User has viewed Last Login Report 5. Hash Data View <ol style="list-style-type: none"> 5.1 User viewed Hash Table Data Report 6. Activity Log Report <ol style="list-style-type: none"> 6.1 "USER" viewed Activity Log Report 	Complied With

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S. NO.	Requirement Location	Requirement Description	Observation
		Application shall have facility to display login date and time of the user in Last Login in tab	Complied With

5.0 Approvals:

Tested by :	Verified & Approved by :
 Shri Avishek Raychoudhury SA 'A', STQC IT Services	 Shri T.V. Subramanyam Director, STQC IT Services

T.V. SUBRAMANYAM
 Director
 STQC IT Services
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